

AMERICAN CINEMATOGRAPHER

The Motion Picture CAMERA Magazine



this issue

Controlling Photographic Reproduction
Standardizing Camera Equipment
An Insert-Car for Today
Lighting Economy
... and other features



January,
1936

Published in Hollywood,
by
American Society of
Cinematographers

25c

THE NEW YEAR



DUPONT NEGATIVE

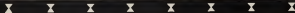
DUPONT

REG. U.S. PAT. OFF.

DUPONT FILM MANUFACTURING
CORPORATION

SMITH AND ALLER, LTD
6656 SANTA MONICA BLVD
HOLLYWOOD - CAL.

35 WEST 45th STREET
NEW YORK CITY
PLANT: PARLIN, N. J.



AMERICAN CINEMATOGRAPHER

A Technical and Educational publication
of motion picture photography

Published monthly by the
AMERICAN SOCIETY
OF CINEMATOGRAPHERS, INC.
6331 Hollywood Boulevard
Hollywood, California

Telephone Glendale 2135

JOHN ARNOLD, President, A.S.C.
FRED JACKMAN, Treasurer, A.S.C.

Volume 17 JANUARY, 1936 Number 1



What to Read

- PROBLEMS of Controlling Correct
Photographic Reproduction**
by Dr. Herbert Meyer, A.S.C. 8
- IT'S THE Audience That Pays**
by Harry Burdick 9
- STANDARDIZING Camera Equipment**
by Emil Oster 10
- AN INSERT-CAR to Meet Today's Need**
by Hans F. Koenekamp, A.S.C. 11
- PROGRESS in Lighting Means Economy**
by Walter Strohm 12

Next Month

- There will be a story from one of the leading Hollywood cinematographers on film of today and film of yesterday noting the progress made by the manufacturers as well as the technique of the cameraman in using film.
- Also Dr. Meyer will give us another of his articles on the laboratory practice.
- There will be contributions from the leading Directors of Cinematography on their methods and practices.

The Staff

EDITOR

Charles J. VerHalen

TECHNICAL EDITOR

Emory Hunt, A.S.C.

ASSOCIATES

Karl Holz

Walter Blanchard

CIRCULATION MANAGER

F. King

ADVISORY

EDITORIAL BOARD

- Victor Milner, A.S.C.
James Van Tines, A.S.C.
Fred Jackman, A.S.C.
Fanciel Edouart, A.S.C.
Fred Gage, A.S.C.
Dr. J. S. Wolcott, Jr., A.S.C.
Dr. L. M. Dancovich, A.S.C.
Dr. L. A. Jones, A.S.C.
Dr. C. E. K. Mees, A.S.C.
Dr. W. B. Raydon, A.S.C.
Dr. Herbert Meyer, A.S.C.
Dr. V. B. Stone, A.S.C.

FOREIGN REPRESENTATIVES

Georges Benoit, 100, Allée Franklin,
Pavillon-sous-Bois, France Seine. Tele-
phone LeRancy 13-39

NEW YORK REPRESENTATIVES

S. R. Cowan, 19 East 47th St., New York
City. Phone Plaza 3-0483



ESTABLISHED 1918. Advertising Rates on application.
Subscription, U.S. \$2.50 a year; Canada \$3.50 a year;
Foreign \$4.50 a year. Single copies 25c. Foreign
single copies 35c. COPYRIGHT 1936 by American
Society of Cinematographers, Inc.

Neither the American Cinematographer nor
the American Society of Cinematographers
is responsible for statements made by au-
thors. This magazine will not be responsible
for unsolicited manuscripts.

AMERICAN SOCIETY OF CINEMATOGRAPHERS

MEMBERS

OFFICERS

JOHN ARNOLD	President
VICTOR MILLNER	First Vice-President
JAMES VAN TREES	Second Vice-President
CHARLES LANG	Third Vice-President
FRED JACKMAN	Treasurer
FRANK B. GOOD	Secretary

BOARD OF GOVERNORS

John Arnold	Frank Good
Bart Glenon	Fred Jackman
Don Clark	Ray Jura
Burt Clyn	Charles B. Lang, Jr.
Arthur Gosson	Victor Miller
George Foley	James Van Trees
Alfred Giles	Vernon L. Walker
Frederick L. Klay, Executive Business Manager	

PAST PRESIDENTS

Philip E. Bruns	Hal Mohr
Geoffrey Goyde	Homer Scott
James Van Trees	John F. Seitz
John W. Boyle	Daniel B. Clark
Fred W. Jackman	

HONORARY MEMBERS

Mr. Albert S. Howell
Mr. Edward O. Blackburn
Mr. George A. Mitchell

PUBLIC RELATIONS COMMITTEE

John Arnold
Charles B. Lang, Sr. Paul Moss
Charles J. Davis Washington, D. C.
George Benoit Paris France
John W. Boyle London England
Ariel Vargis Tokyo Japan
Edwin L. Dear Detroit Mich.
Charles W. Herbert New York City
Lloyd Goodrich London England
John Doran Paris France
Paul Perry Manila P. I.
Law S. Duffren Palestine, Tahiti
Philip M. Chancellor

MEMBERSHIP COMMITTEE

George Foley
Alfred Giles
Burt Longworth

Don Clark
Burt Puttick
Fred Tetzo

ENTERTAINMENT COMMITTEE

Elmer Dyer
Charles B. Lang, Jr.

Frank B. Good
Vernon Walker

WELFARE COMMITTEE

Ray Jura
Fred W. Jackman

GENERAL COUNSEL

Arthur C. Wahl

RESEARCH COMMITTEE

Victor Miller, George A. Mitchell, Dr. Herbert
Wever, John Arnold, Harold Kassaroff,
Emery Rust, Dr. L. M. Dietrich

Directors of Photography

Abel, David
Anderson, Milford A.
Andrew, Levan
Arnold, John
Aub, Jerome H.
August, Joseph

Ballard, Lucien
Barlosky, Andre
Barnes, George S.
Belt, Chas. E.
Benoit, Georges
Binger, Ray
Boyle, Chas. P.
Boyle, John W.
Bradley, Norbert F.
Browne, Fayette M.

Chancellor, Philip
Clark, Dan
Clarke, Charles G.
Clemens, Sam T.
Conner, J. Gene
Corby, Francis
Cressinger, Edward
Cudde, Alvin D.
Cully, Russell A.

Danahy, William H.
Davis, Charles J.
Dean, Faxon
de Graess, Robert
Dewar, Ernest S.
Drivving, Clyde
Durr, Win. H.
Dwyer, Edward
Dwyer, Laron A.
Eichner, Joseph A.
Eduer, E. S.
Eyer, Elmer L.
Eyer, Elmer G.

Egler, Paul
Egson, Arthur
"Edouard" Ferret

Fasson, Marmelen
Fermisken, Roy
Fischbeck, Harry
Foley, George J., Jr.
Forbes, Flatty W.
Foster, Ray
Fouch, Henry
Frand, Karl
Fryer, Richard
Fuller, John P.

Galezio, Len
Gaudin, Gaetano
Gardner, Merritt B.
Giles, Alfred
Gibson, Bert
Good, Frank B.
Guggi, Louis

Haller, Ernest
Happala, Sol
Hammann, Edwin
"Harten" Charles
Heiken, Byron
Hickman, Reed H.
Hinterberg, Charles W.
Hummel, John L.
Hickox, Nell
Hickman, John T.
Hove, James Ward
Hunt, Roy

Ivano, Paul

Jackman, Fred
Jackman, Fred, Jr.
Jackson, Harry
Jewett, Gordon
Jennings, J. D.
Jure, Rde

Keller, W. Wallace
Kemp, Glenn
Kemp, W. E.
Kinsman, Lloyd
Kinsman, D. H. F.
Kokor, Henry N.
Kramer, Milton
Kull, Adolph E.

Lenden, Ben
Lang, Charles B., Jr.
Levin, Sam
Linton, Edwin G.
Lipp, Len
Lipman, Harold
Lloyd Art
Lundin, Walter
Lynch, Warren
Lyons, Chas.

MacDonald, Joe
Mackenzie, Jack
MacWilliams, Glenn
McLennan, Dan
Manley, J. Patrick
Marion, Oliver
Marshall, Chas. A.
Marshall, William C.
Martini, Alvin
Morton, Howard J.
Moss, Rudolph
Mayer, Fred
McGill, Ted
McGill, Beverly

Melson, Geo. B., Jr.
Mellor, William C.
Merrill, John J.
Miller, Arthur
Miller, Vagis B.
Miller, Victor
Mohr, Hal
Morgan, H. H.
Mourado, Nick
Muller, Henry C.

O'Connell, L. William
Overbaugh, Ray J.

Pelmer, Ernest
Pech, Kenneth
Perry, Harry
Peterson, Gus C.
Pitack, Robert H.
Pitts, Sol
Pollock, Gordon

Rapp, David
Rass, William A.
Raynolds, Ben F.
Reil, Irving C.
Roberts, James
Robinson, George
Rose, Jackson J.
Rosen, Charles
Rosen, Harold
Ruttenberg, Joseph

Schwaederson, George
Schwabson, Charles
Seitz, John F.
Shackelford, James B.
Shawley, Leon
Shaw, Henry
Shore, Douglas
Sisker, John A.
Singer, Allen
Silver, John
Smith, Arthur
Smith, Jack
Smith, Leonard
Snider, Edward J.
Spencer, Theodore
Stewart, William A.
Stevenson, Mack
Stout, Arthur J.
Strong, Walter
Struss, Karl
Sturmer, John

Tennant, G.
Tessell, Fred
Thompson, Allen O.
Thompson, William C.
Tobin, Robert
Todd, Arthur
Tolson, George
Touss, Leo
Towers, Richard
Trenn, Chas. T.
Turkley, Tom

Volante, Joseph A.
Van Buren, Ned
Van Enger, Willard
Vander Veen, Willard
Van Trees, James
Vogels, Aral
von Sternberg, Josef

Wagner, Sidney C.
Walker, Joseph
Walker, Vernon L.
Warren, Dwight
Warrenton, Robert
Wentworth, Harold
Wetzal, Al
Whelan, William
White, Leroy
Whitman, William N.
Wingo, Rex
Wingate, Dewey
Wychalk, Allen

*Zach, Harry
Zucker, Frank C.

Executive

Cinematographers

Ahem, Lloyd
Albert, C. L.
Anderson, Don
Anderson, Wesley
Anting, Arthur F.

Baderason, Jacob
Baker, Walter
Ball, Jack
Bennett, Guy M.
Bennett, Monroe
Bentley, Fred
Biro, Joe
Blackmore, Cliff
Booth, Frank H.
Boone, Rube
Brody, Walter H.
Browning, Thomas
Buck, Robert

Carlin, Walter H.
Channing, Wallace
Clark, Ray
Cline, Wilfred M.
Cohen, Edward
Culligan, Russell D.
Cortez, Stanley

Davis, Harry
Davis, Leonard E.
Dawson, Joe B.
Deaght, James B.
Dunn, Linwood G.

Erick, LeRoy
Estabrook, Edw. T.

Fopp, Donald L.
Fisher, Jackey
Fisher, C. Curtis
Finger, Frank
Finger, John
Fitzgerald, Edward

MEMBERS

Gunnat, Paul
Guttmann, Mosley
Gussons, Jeff T.
Hassberg, Irving
Jordan, James
Joss, King D.
Green, Kenneth
Greene, Al M.
Gurley, Sumner
Guthrie, Carl

Hollenberger, Harry
Horton, Russell
Harper, James S.
Harris, Earl
Heckler, Sam C.
Henderson, Edward
Hess, Robert
Higgins, L. Owens

Irving, Allen E.

Jennings, Leslie E.
Jones, Allyn C.
Joyce, Michael T.

Kelley, George F.
Kelly, W. J.
Kessan, Frank
Kroll, Jones

Landon, Theodore
Lone, Al L.
Loring, Reggie
Ludwelle, Joseph
Lazlo, Ernest
Lounis, Charles C.
Lorper, Paul K.
Lund, Lionel A.
Lutz, Cecil

Marlett, Mark W.
Mars, Jack A.
McCann, John T.
Meade, Kym
Merrill, Harry
Moffat, R. L.
Mori, Pierre M.
Myers, Albert

Newford, Guy J.
Newsham, Robert S.
Noble, Geo. C.
Nolick, Joe

Palmer, Robert
Pence, Otto
Pitts, Robert
Pyle, Edwin L.

Ramsey, H. Clark
Ramsey, Roy L.
Rand, William
Ridman, Frank
Ross, Ray
Roberts, Albert G.
Roberts, Joseph
Robinson, Walter C.
Roe, Guy
Rosenberg, Irving

Sakuma, Charles, Jr.
Schuch, Victor
Schultz, John J.
Schur, William F.
Schwarzbach, G. P.
Shupham, Bert
Smith, Ernest F.
Smith, Harold J.
Smith, William Cooper
Spivey, Wm.
Stine, Clifford B.
Sullivan, Wm. P.
Sumner, Robert L.

Tappenberg, Hattie
Thompson, Stuart
Titus, Frank

Ulin, William R.
Unholz, George

Vaughan, Ray V.
Vogel, Paul Charles
Vogel, William F.
Wells, Harry
Werner, Carl
White, Ben
Wild, Perry
Willey, L. Guy
Williams, Al P.
Williamson, James

Young, Jack R.

Assistant Cinematographers

Albert, E. S.
Abramson, Melvin
Adams, Eddie
Adams, Ralph G.
Anderson, Jack
Anderson, Eddie
August, Joseph S.

Babcock, Royall F.
Baldwin, Harold
Barber, C. C.
Barth, Wilford
Beckman, Neal
Beyliss, Everett
Bianchi, Ralph
Bopp, Michael
Bryne, Chas. R.
Bunt, George
Bradford, G. H.
Bridgman, Milton
Bryman, Donald H.
Brunner, Robert
Buchholz, Frank H.
Burges, Frank
Burke, Charles

Carr, Lawrence
Cassidy, John C.
Caney, Harold F.
Carter, Ellis W.
Carron, Joseph A.
Calkins, William H.
Cohen, Ben
Cohen, Sam
Calkins, Edward C.
Cline, Chas. M.
Crawford, Lee
Crockett, Ernest J.
Cronquist, Henry, Jr.
Crouse, John
Cruse, Warner
Curran, Jude

Daly, James
Dalzell, Arch R.
Davies, Gene L.
Davis, Mort
Davis, Bob D., Jr.
David, Richard S.
Dove, Harry
Dunson, Fred
DeAngelis, Louis
De Castellan, Paul
Deverson, Dale
Deverson, George
Dodds, Wm.
Doran, A. Richard
Dorris, Joseph
Dowling, Thomas L.
Duggan, Frank
Dye, Geo. J.

Eagon, J. P.
Eaton, Bert
Eaton, John
Elliott, August J.
Eyster, Jack J.
Ely, Geo.
Evers, Frank D.

Foley, Joseph E.
Forneman, Perry
Fischer, Herbert J.
Forsell, William
Friedrichs, Elsworth

Gavin, Edward
Gavin, Frank, Jr.
Gawler, Charles R.
Gerstle, Arthur
Goss, James M., Jr.
Gowen, Bob J.
Graham, Harold W.
Grant, Marcel
Grant, James Arthur
Green, Dan
Greer, John

Hacker, James C.
Haddley, Ledger
Hayes, Taine D.
Higgins, James Colman
Higgs, Stuart P.
Hoffman, Russell
Holahan, Richard J.
Hoskinson, Walter B.
Hovner, Russell C.
Hordley, D. S.
Hunter, Kenneth
Hyland, Edward

Ivory, Jesse

Johley, Wm. A., Jr.
Jones, Edward C.

Karler, Fred R.
Kaufman, R. King, Jr.
Kearns, Edward
Keller, Alfred S.
Kenny, Jack
Kins, James V.
Kiss, Irving
Korman, Mort
Korhman, Jack
Kunkel, Lou E.

Lackey, Walter E.
Laird, Art
Larson, Vernon
Larson, Vernon
Larson, Philip

Leahy, Chas. P.
Leibowitz, Alfred
Leiser, Carl
Linn, C. J.
Lippert, Eugene
Littler, William H.
Lykins, Volva Joe

Mack, Bob H.
Marlborough, John
MacDonald, Stanley
Marble, Harry
Marshall, Bill
Martin, John
Martini, Enzo
Maurice, Bud
McDonald, Frank
McDonald, Nelson C.
McIntyre, Andy
Meade, Kenneth
Melt, John
Miles, Paul
Molina, Luis
Moore, Bernard
Morse, Robert C.
Morris, Thomas C.

Nichols, John M., Jr.
Noble, Ray Wm.
Norton, Ray
Owens, Alfred
Parker, Harry
Parsault, Oliver D.

Randall, Walter
Reinhold, Wm. G.
Reis, Robert
Riley, William
Rupp, Marshall B.
Russell, John L., Jr.

Sanford, S. A.
Sargent, Dan
Schering, Albert
Schuch, William
Seawright, Ryan
Sherman, Roger C.
Shenker, C.

Sherr, Lester
Siler, Clarence
Smiles, Alfred E.
Smith, Dave
Smith, H. C.
Snyder, Edward F.
Southall, Fleet
Sroum, E. Charles
Strong, William M.

Texas, Fred
Thomas, Jack
Toma, Rod
Tripp, Ray

Van Tress, James, Jr.
Van Wazer, John Pierce

Walsh, Mike
Ward, Lloyd
Wardell, Paul K.
Weller, Carl
Wesley, John
Westman, Ted
Westman, Leonard
Weston, Harold
Whitell, Jack E.
Whitely, Edward L.
Whitely, William
Wilke, Bert
Wirth, Larkhop

Drill Photographers

Alexander, Kenneth
Allen, Ted
Ausp, George
Anderson, Bert
Apost, Virgo
Auray, Max

Bachrach, Ernie
Barney, Frank
Banc, Harry
Benda, Joseph P.
Bendell, Edward
Benn, Milton
Bert, Clarence S.
Bulch, Chas. E.
Bulch, Malcolm

Clark, Sherman L.
Coburn, Robert
Casper, John
Cronmeyer, W. E.
Crosby, Warner M.
Crowley, Carl

Elliott, Mack
Ely, John
English, Donald A.
Epp, James D.
Evans, Thomas
Evensmith, Henry

Ford, David H.
Frensch, Benson
Fryer, Elmer

Gilum, Doc
Gilum, Ted A.
Gold, Milton
Graves, Clarence "Shel"
Graybill, Sanford
Grimes, William H.

Head, Gordon C.
Henderson, Fred S.
Homer, Jerome E.
Hewitt, Clarence B.
Hornell, Geo. P.
Hopton, N. John

Johnson, Ray L.
Jones, Raymond H.
Julien, Max

Kohn, Alexander
Kynes, Donald B.
King, Clifton
Kornmann, Gene

Lacy, Madison S.
Lader, Herman
Lipson, Irving
Lubben, C. Kenneth
Longest, Gordon
Longest, Bert
Lynch, Bert

MacDonald, Melvin A.
Marlin, Roy D.
Mondst, S. C.
Morley, Mickey
Morton, Shirley Vane
Mason, Clifton
McAlpin, Hal A.
McNulty, Stephen
Mutha, John J.
Morton, Joseph C.
Morton, Lanning H.

Nolan, Raymond G.

Oborne, Harry
Patrik, Fred A.
Paul, M. B.
Pewley, Frank

Richardson, G. E.
Richey, Eugene R.
Roberts, Leroy S.
Rowley, Les

Schuler, Adolph L.
Schubman, Everett A.
Seibald, Merritt B.
Spauldon, Oliver
Sis, Bert
Slane, Ed

Tanner, Frank
Thomas, Wm. E.

Uhlen, Anthony

Van Pelt, Homer

Walsh, Will, Jr.
Webb, Chas. Scott
Wickert, Harold M.

Necessary Members

Mr. E. D. Blackburn,
Los Angeles, Calif.
Mr. George Eastman,
Rochester, N. Y.
Mr. Thomas A. Edison,
Orange, N. J.
Mr. Albert S. Howell,
Chicago, Ill.
Mr. George A. Mitchell,
Los Angeles, Calif.

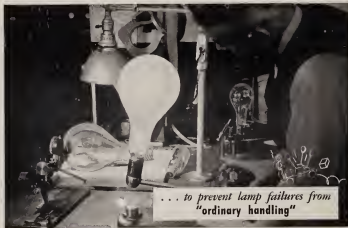
Associate Members

Mr. Louis A. Bess,
Mr. George Cave
Dr. L. M. Detmoch
Mr. Fred Gage
Mr. Emory Huse
Dr. Albert A. Jones
Dr. C. E. K. Mann
Dr. Herbert Meyer
Mr. Holis Morris
Mr. B. R. Ryley
Dr. V. B. Sessé
Dr. J. S. Watson, Jr.

Inactive Members

Dunning, Dodge
Duffell, Max B.
Fisher, William
Gower, Maurice G.
Graham, Stanley
Jackson, Dr. Floyd
Lackwood, J. R.
Paul, Edward F.
Ross, Len H.
Saxe, James
Shul, William

WE JOUNCE LAMP BULBS ON A BLOCK OF STEEL



Ordinary handling can be hard on a lamp bulb. It all depends on what you call "ordinary handling." And handling on movie lots is as tough on lamps as any handling they receive.

To be sure that the insides of G-E MAZDA lamps will stand up, we test them for fragility. For lamps like the one pictured, this test takes the form of a jouncing ride on a hammer of steel.

The lamp is first inspected for any breakage or distortion of filament support. (In frosted bulbs, a special device enables the inspector to see inside.) Then the lamp is placed in the test machine shown above which drops the lamp onto a block of steel. This delivers a nasty jounce such as a lamp might receive when a truck carrying lights from one set

to another hits the bump at the bottom of a ramp. The lamp is lighted and inspected again, especially for breaks in the stem or exhaust tube... breaks which would permit air to enter and end the life of the lamp.

We test for fragility, a definite proportion of every size G-E MAZDA lamp produced, according to the service expected of the lamp. The lamps are selected at random, and tested, by employees of an independent testing organization, Electrical Testing Laboratories.

It is by such means that General Electric assures you of dependable lamps adapted to your needs. That is one reason why scores of cinematographers use G-E MAZDA lamps for every lighting purpose. General Electric Company, Nela Park, Cleveland, Ohio.

GENERAL  ELECTRIC
MAZDA LAMPS



AGFA

35 MM. NEGATIVE AND POSITIVE FILM



MOVIE fans who never heard of fineness of grain appreciate unusually good photography. And you know how much that good photography depended on fine-grain negative. Agfa's new, improved SUPERPAN is the last word in fineness of grain and everything else you look for in an ideal panchromatic film. Made by Agfa Ansco Corp. in Binghamton, N.Y.

C. KING CHARNEY, Distributor

HOLLYWOOD
6572 Santa Monica Blvd.
Tel. Hollywood 2918-2919

NEW YORK
245 West 54th Street
New York City

FEARLESS CAMERA CO.

Announces a New

Rotating Base Camera Dolly

- To meet the ever-changing technique in photography and to accommodate the latest type camera equipment.
- This new dolly supplements the Fearless-Fox Velocitor which we will continue to manufacture.
- This new dolly has many new features, including:

A CANTILEVER ELEVATOR ARM MOUNTED UPON A BALL BEARING TURNTABLE
EXTREME RIGIDITY IN ALL POSITIONS
LIGHT WEIGHT ALUMINUM ALLOY CONSTRUCTION
SILENT, FAST, EASY MANUAL OPERATION

Full information and prices submitted on application

ALSO

TWO NEW CAMERA MOTORS
For the NEW MITCHELL N C SOUND CAMERA



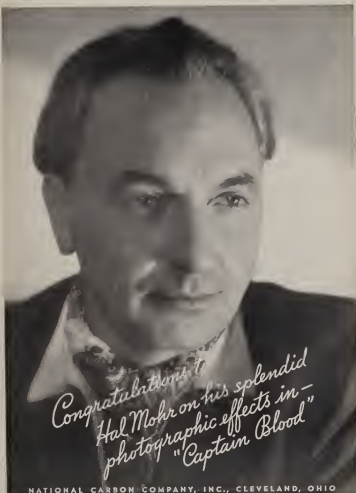
- 1—A Silent Synchronous Blimped Motor built into camera door
2—A variable speed motor built into camera door

Special Motors, Photographic and Sound Equipment Built to Order

FEARLESS CAMERA CO.

2577 Santa Monica Boulevard

HOLLYWOOD, CALIF.



*Congratulations to
Hal Mohr on his splendid
photographic effects in—
"Captain Blood"*

NATIONAL CARBON COMPANY, INC., CLEVELAND, OHIO

Problems of Controlling Correct Photographic Reproduction

PART 2

AS STATED in the preceding article, correct photographic reproduction is accomplished by rendering visual sensation in the finished print identical to that conceived by the eye when the original object is observed. This visual sensation is controlled by the degree of overall brightness and contrast.

If we deal with an object of one even brightness only, which, for instance, is represented by a single color plane, the correct photographic reproduction is very simple depending solely upon a proper relation between the following units:

- Brightness of the object as a function of negative exposure
- Negative exposure as a function of negative material speed
- Negative development as a function of negative density
- Negative density as a function of positive exposure
- Positive exposure as a function of positive material speed
- Positive development as a function of positive density
- Positive density as a function of brightness of reproduction

When, however, the object is composed of areas of differing brightness values and different colors, which is the case in almost every practical instance, the problem of reproducing identical brightness expands into that of reproducing the correct relation between all brightnesses or visual contrast. This is far more complicated, as will be seen by considering the characteristics which in this case must be placed in proper relation to satisfy correct photographic reproduction.

The total visual contrast in an object can be composed of brightness contrast, hue contrast, and saturation contrast. In ordinary black and white photography this visual contrast can only be rendered in the reproduction as brightness contrast; that is, hue contrast and saturation contrast become zero.

The additional factors of visual contrast and color, when reproducing objects composed of differing brightness and colors, require that the following characteristics be kept in proper relation during the processing of the negative and the print:

- Characteristic curve of negative material as a function of visual brightness contrast in the object
- Color sensitivity of negative material as a function of visual hue contrast and saturation contrast in the object
- Characteristic curve of positive material as a function of characteristic curve of negative material
- Overall brightness contrast of print as a function of total visual contrast

In this analysis of the problem of correct photographic reproduction the subjective phase has not been included. This would have necessitated the consideration of the adaptation level and the color selectivity of the individual observer's eye, referring to the visual sensation created by the object as well as the reproduction.

Present day photographic technique utilizes many in-

struments and methods for the purpose of properly controlling most of the above relations.

- Objective brightness and negative exposure are determined by light meters.
- Speed and gradation of negative and positive materials are analyzed by densitometric instruments.
- Chemical development of both negative and positive materials is controlled by densitometric methods.
- Positive exposure is selected by semi-automatic timing instruments which produce a graduated scale test.

These do not yet, however, exist a practical method or instrument which permit determining of the total visual contrast in the object or its three components, brightness contrast, hue contrast, and saturation contrast in relation to the characteristic of the negative material.

The explanation that, even without this important link, the reproduction of satisfactory and artistically beautiful photographic results is possible lies in the fact that artistic satisfaction created by a photographic reproduction is largely independent of the degree of correct natural reproduction. This is possibly due to the many visual sensation impressions received and recorded in our daily lives and which are all of widely different contrast relations, so much so that regardless of our familiarity with the object, our artistic imagination will very likely find the reproduction artistically pleasing no matter how truthfully the original visual contrast has been rendered.

This should not, however, lead to an attitude of satisfaction with our present status, which does not provide a dependable instrument or method to correctly calculate total visual contrast or its components in the object. Regardless of artistic satisfaction, there are many occasions when an accurate knowledge of visual contrast relations would be most helpful, for instance, when pictures are made on location over the length of a full day or at several days which might mean a very noticeable and undesirable change in brightness contrast in the object due to the shifting of the sun or to the natural change in sky conditions.

Before dealing with the possibility of solving the problem of determining visual contrast in relation to photo-

Continued on page 18

by
Dr. Herbert Meyer, A.S.C.
Head of Hollywood Research Bureau,
Agfa, Ansco Corporation



Norbert Brodine, A.C.

It's the Audience That Pays—

Reminds Norbert Brodine

by
Harry Burdick

POSSESSED happily of a sharply analytical mind and a flair for delving into economic trends, Norbert F. Brodine carries on his practice of cinematographic art with the shrewd calculation and police afterthought of providing the greatest amount of entertainment to the greatest number of persons who may give eye to his screened works.

He charts a careful cinematographic-commercial compromise, always aware that, despite the wide sweep of activity of his command, he must fabricate a commercial product that will go out into the channels of trade and return suitable fiscal returns to its sponsor.

Small-town theaters and audiences comprise the bulk of motion picture audiences. They determine the ultimate financial success of any celluloid drama. Reeking this vital fact, Brodine makes pictures for this greatest audience.

Not that he plays down to any imagined low level of small-town intelligence. To the contrary, he has found it to be the most soundly critical of all audiences. He does, however, make a noteworthy distinction between the professional screen-gazer of Hollywood and New York, and real movie-goer.

It is, of course, a fair temptation so to photograph any screen opus in a manner as to win instant applause from immediate studio officials and fed-up film reviewers.

Brodine staunchly rebukes this lure and pushes his horizon back to the ultimate consumer, so to speak. For therein lies the test-tube of the product. And it is significant to observe that so ably does he interpret his dramas to Mr. and Mrs. Average Audience that they win warm acclaim from professional critics as well.

With all the movie-camera cinematographic instruments available for use plus a thorough comprehension of the manner in which these tools may be employed to produce epic sweeps of projected beauty, it calls for considerable courage to hew to the straight line of simple story revelation.

Yet, Brodine has found, the nation's greatest audience prefers a straight-forward depiction of action, understood easily and pleasingly, unimpeded with cinematographic calisthenics.

He spends vacation periods and odd hours prowling about smaller communities, sitting in neighborhood and village theaters, observing audience reactions. He studies returns from his pictures, with disconcerting consideration to size and type of theater, and character of its audience.

His observations indicate that the average audience is absorbed in the visual action of screened characters, all other considerations are secondary. So he subscribes to his fundamental of always fully lighting faces. Audiences want to see those faces. He lights them so they can be seen—without exception, even though he must take artistic license at times to do so.

Audiences, he finds, want to relax and have the film's action brought to their eyes. To this end, Brodine makes clear pictures, pictures that can be seen in their entirety without effort; pictures that relate their tales in crisp, vivid sequences.

Though it may seem paradoxical, he has a strong liking for the use of effects. They aid in creating illusion and audiences, he finds, like fast bus offices in quest of illusion, make-believe, entertainment and escape from matter-of-factness.

But here again he strikes a careful balance between the art effect that contains only sheer beauty and the effect that is, candidly, of commercial worth. He is most solicitous not to, so to put it, over-effect. He draws the apt comparison of a musical composition of such delicate nuance that its charm is appreciated only by a select group of ultra-sophisticates artistically, and one of such intimate, readily-recognized beauty as to sweep into universal acceptance.

Never for a moment does Brodine disregard this cinematographic compromise with the commercialism that pays the bills. An artistic barrier, if you will, but a most valuable consideration in this era of balance sheets.

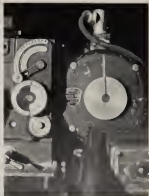
His observations into exhibitors' conditions, and these

Continued on page 16

Standardizing Camera Equipment

by
Emil Oster

Camera Executive, Columbia Pictures Studio



Gross-general marks on motor knob and shutter indicator synchronize any camera with background-projector.

THE PHYSICAL standardization of camera equipment and accessories is a subject which is very properly receiving more and more attention from the industry. Such standardization can be of great benefit to a large studio, and it is of vital importance to a smaller plant. This discussion of the subject is necessarily based on the writer's personal experience in attempting such standardization of equipment at the Columbia studio, but the general principles can be applied equally to the problems of a larger plant.

It is just as well to begin by admitting that our policy of standardizing equipment was not due to any particular foresightedness but was forced upon us by necessity. When I took charge of the Camera Department of the studio, the firm was regarded as one of the industry's less important plants. Consequently, the equipment available was limited, and financial considerations precluded any hope of an extensive procurement plan. Nevertheless, at times when production was high, quite a bit of additional equipment was necessary. This of course was rented from individuals and camera-rental firms. And here came the problem: when you rent a camera, you get a good camera, but with little or no special auxiliary equipment. If the studio's own equipment—blimps, dollys, and so forth—is fitted with special gadgets, the rented equipment cannot be used freely unless extra time and money are spent in adapting it to work with the studio gadgets. Clearly, this would not be a good business policy! So the obvious solution is to standardize the studio's equipment and methods so that any commercially available studio camera or accessory can be used without modification.

One of the first things that came up was the matter of "blipping," or flagging the starting-frame of each scene so that picture and sound-track negatives can be easily synchronized. In many studios this is done by a little electric light known as a "blimp-light," which tags a round spot on the starting-frame. But "blipping" is not a practice common to all studios, so very few rental cameras have a "blipping" system. A simple, but highly effective substitute was found in a routine which can be performed

with any Mitchell camera. At the start of a scene, the assistant simply racks the camera over into shooting position, and twirls the motor-knob until the shutter is open, completely flagging an entire frame. This quickly-made "blimp" is not merely as good as the conventional type, but more easily located in the negative or rush-print.

Another problem is the making of projected-background process shots. Unlike most major studios, we do not maintain a separate special-effects department; the production cameraman handles his own process work (except in rare instances where highly specialized machinery may be needed), and he films the process shots right in sequence with the rest of the picture, instead of doing all the process work after the normal scenes are finished. We use portable background projectors and portable screens, which are wheeled onto whatever stage the company may be using.

Under these conditions, it is out of the question to maintain special process cameras and process motors, yet the cameras and motors must be perfectly synchronized with the projector. We have found a simple method of synchronizing with standard cameras and motors, also with standard Mitchell cameras of the newer type, which have a visual indicator at the rear to show the position of the shutter. At the start of a process sequence, the projector and camera motors are phased. The cameraman then notes the position of the shutter-indicator, and with a grease-pencil draws a corresponding line on the motor-shaft knob. That's all there is to it. No matter what may occur during the day's work, the synchronization may be established in a few seconds. The camera may be moved ahead or behind—out of cycle—in reloading, or in making normal scenes between process-shots, but all that is necessary for re-synchronization is to turn the motor-knob until the position of the grease-pencil line on the knob and the shutter-indicator correspond. This can always be accomplished within a maximum of five turns. Once these marks coincide, the camera and projector are "in sync." Similar

Continued on page 14

An Insert-Car to Meet Today's Need

by
Hans F. Kaasekamp, A.S.C.

THE PHYSICAL conditions of picture-making today are in many important respects very different from what they were in the pre-Vitaphone era. With the exception of units making "chases" and process key-plates, our cinematographers are working with equipment vastly heavier and more bulky than was used ten years ago. Working technic, too, has changed notably. With regard to the auxiliary equipment used on the stages, the need for recognizing this fact has been readily apparent, and we have an abundance of cranes, dollies, rolling tripods, and the like, all designed and built to cope with present-day problems.

But as for camera "insert-cars," which are a very important piece of equipment in any man's studio, we have in most cases seen fit to let nature take its course—and struggle along with pre-folkie equipment, usually overloaded to a dangerous degree, and falling short in necessary performance. In a way, this is logical enough, for a good insert-car represents a tidy investment and should be expected to outlast many lesser units. So in many instances, we have tried to get by with old equipment, or with makeshifts in which the larger camera-carrying trucks were pressed into service as photographing cars.

Within the past six months, however, the Warner Bros. studio has developed a really modern insert-car—the first, we believe, which has been designed and built specifically to meet modern conditions. While the machine was designed and built under the direct supervision of Art Klein, head of the studio's mechanical and transportation departments, it represents a combination of ideas gleaned from cameramen, directors, drivers, and virtually everyone on the lot who has ever had anything to do with camera cars. And it is a very successful composite!

The chassis is a standard Lincoln passenger-car. The regular Lincoln motor, which developed 90-horsepower, has been modified in the studio shop to develop over 135 hp. This was done by fitting new camshafts, a downshift intake system, and raising the compression. The gear-ratio has at the same time been lowered by installing the same gears used in the Lincoln T-passenger limousine, which is the lowest-gear of the line. None the less, the car can

reach a speed of nearly 70 miles per hour, fully loaded, and can tow another car (from either side of the rear) at better than 50mph. The acceleration, of course, is remarkable. Special springs have been fitted, to give the ultra-smooth riding demanded while yet carrying the abnormally heavy loads, and blowout-proof balloon tires are fitted on extra-sturdy 18-inch wire wheels. Thanks to excellent bearings, the car can, if necessary, be rolled by the stage crew like an ordinary dolly.

In designing the camera-carrying features, special care was taken to provide for mounting as many cameras as necessary, to give a wide range of possible angles, and perfect rigidity. There are no makeshift set-ups, the problem of adjusting tripods, tying them down, and so on, is eliminated. Four basic camera-positions are provided: the conventional front platform, rear platform, in the body of the car, and atop the driver's cab. While the cameras are rigidly mounted, the mounts may be adjusted in a wide, and perfectly overlapping range of heights. The underpinning of the mounts consists of tubular chrome-molybdenum steel railings, across which are clamped U-shaped duralumin bars, upon which fit the mounts for cameras, lights, microphone-booms, etc. These mountings are adjustable in any direction. To take a single one of them, for example: the rear-platform mount consists of four tubular uprights, connected by two longitudinal members which carry the flat camera-bar. By means of clamps, the longitudinal members may be set at any height from platform-level up to over three feet. The camera-bar may be slid forward or back along these rails, while the camera-mounts may be locked at any position along the bar. A supplementary mount, just at platform-level, provides for ultra-low set-up, when needed, and when the platform is not in use, a removable tubular member across the rear serves as a



Continued on page 17

Progress in Lighting Means Economy

by
Walter Ström
Chief Engineer
Twentieth Century-Fox Studios



MAKING moving pictures isn't a question of "getting by," but of turning out first-class product with the minimum loss of time and expenditure for labor and such raw materials as film, electricity, etc. If we can make one lamp do what two were often required for—if we can make 1,000-watt globes out-perform 2-KW ones, we save time, labor, and current (not to mention reducing replacement-charges!) and with these savings on one side of the ledger, the first cost of equipment quickly vanishes.

For example, we could probably still "get by" making talking pictures on an old-time glass stage—but who would want to do it? Think of the time and effort expensively lost in adjusting the mass of cloth diffusers over the set—in juggling reflectors around to provide light effects—and of trying to keep a consistent lighting in spite of the ever-changing movement of the sun! Yet, back around 1914 (even later in some instances!) that was so completely the actual way to make pictures that most executives, directors, and even cameramen fought strenuously against the innovation of artificial lighting. In D. W. Griffith's "The Clansman" ("The Birth of a Nation"), which was one of the early films I worked on, virtually the only artificial lighting used was provided by magnesium fires. A year or so later, when I was with Chaplin, just after he left Mack Sennett, the interior scenes were made on a daylight stage, with the sets erected on a revolving platform. Theoretically, all that was necessary to keep the lighting constant was to revolve the platform (and the set) as the sun's angle changed. But each time, a myriad of reflectors had to be reacquainted, the diffusers changed, and so on—while the comedy waited. It was not until the production of "Easy Street" that Chaplin decided that while he might be "getting by" without lights, he would get by a whole lot better and faster under arcs.

The arc, in those days of Orthochromatic film, was of course the most logical choice for studio lighting. Even though few really high-powered incandescent globes were available, some experiments had been made, especially

with the "daylight blue" variety, I made some myself, and I know other individuals and studios, including Universal, had, but with a film that so strongly preferred the blue light of the arc, these experiments were not especially successful.

None the less, they had persuaded me that if the right film could be had, and the right equipment developed, the incandescent lamp would have basic advantages. It would be simpler and easier to use, it would require few, if any, special adjustments, and would stave those ubiquitous gentlemen who feel they can improve any moving mechanism into which they can get a screwdriver or a pair of pliers. And of course, you could do things with an incandescent that you never could with an arc—tuck it away in a cramped space and forget it, point it straight down, or at any odd angle, without losing efficiency, and so on.

But it was not until Panchromatic film began to come in that the incandescent was a practical possibility. When that development occurred, I took the bull by the horns, and with the cooperation of Lee Garmes, who was the cinematographer on the production, we made the last feature completely lit with incandescent lamps, at the old First National studio in 1926, the picture, I think, was called "The Rebel." For general lighting, I simply used ordinary floodlighting units such as are used to floodlight any building or sign. But for spotlighting, I had a much different problem. No high-powered Mazda spotlights existed. A simple list of the attempts made with lenses, experimental metal and glass reflectors, and so on, would fill a volume. Finally, thanks in no small way to the untiring efforts of Peter Male and Elmer Richardson, who had just launched the Male-Richardson firm, the General Electric Engineers, and others, the ancestor of the present down-type reflecting Mazda spotlight was evolved. With the facts and figures carefully culled from actual experience in making a full-length feature under Mazdas, Fred Pelton and I presented the case to the A.S.C. and the Academy, with

Continued on page 16

COMPLETE

UNPARALLELED photographic quality... speed... fine grain... Eastman Super X has them all. It is the complete modern negative film. Agreeing that it leaves nothing to be desired, cameramen and producers are using it in the bulk of today's feature productions. Eastman Kodak Company, Rochester, N. Y. (J. E. Brulatour, Inc., Distributors, Fort Lee, New York, Chicago, Hollywood.)

EASTMAN *SUPER X*
PANCHROMATIC NEGATIVE

Recording Machinery
Hollywood Motion Picture
Equipment Co.
 645 Mitchell Ave. Cable Address
 Hollywood, California



NEW IMPROVED
CINEGLOW
3 ELEMENT

Recording
Lamp

- Longer Life
- Mass Exposure
- Uniform Quality

Used The World Over

Write for prices
 and literature

Blue Seal
Sound Devices

Incorporated
 723 Seventh Ave.
 New York, N. Y.

Standardizing Camera Equipment

Continued from Page 10

markings, of course, are made on corresponding points in the projector, so that projectors and camera-crew can proceed independently, confident that when a scene is started, their machines will always be in phase. No telephoning or shouting messages from camera to projector are necessary to establish this fact. The only time that thought of phasing is necessary is when the troupe moves to another stage, fed from a different distributor. Then the phasing and marking operations are gone through again, and work goes on as before. Best of all, the same cameras and motors used for normal production can be used, unchanged, for process work, whether they are studio-owned or rented equipment. Any number of cameras may be used, all in perfect "sync" with the projector.

The matter of such auxiliaries as blimps, tripods and cranes was another difficulty. When camera-booths gave way to blimps, every studio, naturally, devised its own type, to meet its special needs. Sound men, cameramen, and mechanics were rather feeling their way along, improving at every other step. Inevitably, each studio evolved a lot of

special fittings for use with its own blimps. Often, the cameras themselves were extensively modified, sometimes to the point where they could be used only in their own special coverings. Because of our particular equipment problem, we could not afford the luxury of such special blimps and fittings. Our blimps had to accommodate not only our own cameras, but also those we might rent. And the latter could not be changed to suit our blimps!

After a careful study of the blimps commercially available, we standardized on the type designed by Victor Roby, and manufactured by the Studio Equipment Company. We have purchased a number of these, and sent others—from several sources—when we need additional equipment. Any standard Mitchell camera can be used in these blimps, put in or taken out at a few seconds' notice. Our crews have the advantage of knowing that every blimp and camera they may use will fit each other perfectly, without any changes or adjustments, and with no special gadgets to worry about.

For much the same reason, we have standardized on Fox "Velocitors" and



Junior
 (2,000 Watt)



SOLARSPOTS

The Perfect Photographic Light



Senior
 (5,000 Watt)

In Every Studio

Discriminating Cinematographers are demanding Mole-Richardson SOLARSPOTS. The reason? The perfectly controllable, wide-range beam of the exclusive Meniscus-lens optical system assures better lighting with fewer units, and reduces the need for diffusion. From the tightest spot-beam, the light may be spread to a 44 degree flood with no trace of "hot-spots" or dark rings. Never before has there been a lamp so ideal for photographic lighting.

MOLE-RICHARDSON, INC.

941 No. Sycamore Ave., Hollywood, California

Cables: "Menne"

AMERICAN
CINEMATOGRAPHER**HAND BOOK and
REFERENCE GUIDE**

Rich in valuable information for every practical cinematographer. Used by the leading cinematographers in Hollywood studios.

Only \$2.00 a copy

American Cinematographer
6331 Hollywood Blvd.
Hollywood, Calif.

Attention . . . Foreign Producers!
DE BRIE AT SACRIFICE

New Type **SUPER PARVO DEBRÉ**

Three Best Camera No. 8000 Successor

Has built-in meter, automatic diaphragm, pilot pins and anti-bubbling device. Four 1000-ft. magazines—40mm, 35mm and 35mm lenses—Debré motion tripod and new type Debré Rider leather-covered carrying tracks and tripod cover. It's the latest type equipment . . . the new!

Thoroughly Guaranteed
SACRIFICE \$2,150

**MOTION PICTURE
CAMERA SUPPLY, Inc.**

723 Seventh Avenue New York City
Cable: "Cinecamera"

Reby's small crane-type dolly. The latter is particularly advantageous in that the crane-arm is mounted on a rotating platform, and may be revolved through a full circle, eliminating the difficulties encountered when trying to make an extended panning shot from a fixed-arm crane. We have also standardized on a modification of the M-G-M-Mole-Richardson type of cranked pan-and-tilt bimp head. The average free-head, we have found, when used with a heavy bimp, lacks the balance necessary for really facile operation. The cranked head takes the strain of counterbalancing the bimp from the Operator's arms, and allows him to operate the camera more accurately. We have substituted a lighter construction, largely of duralumin, and provided a dual-ratio gearing in the panning movement, one ratio giving a slow pan, another a fast one. These heads are interchangeable, and may be shifted from cranes to rolling tripods very easily, while, if necessary, ordinary freeheads may be substituted when working without the bimp, as in sink shots, "wild" shots or on location, when only fabric soundproofing is used.

Fortunately, since the time when I entered the Columbia studio, the firm has prospered and, so to speak, come up in the world. More and better equipment

MOVIOLA
FILM VIEWING and
REPRODUCING MACHINES
ALL MODELS ON DISPLAY—
FOR SALE OR RENT
Illustrated Literature On Request
**MOTION PICTURE CAMERA
SUPPLY, INC.**
723 Seventh Avenue New York City
Cable: "Cinecamera"

FRIED 35MM

LIGHT TESTER

In Use by Hollywood Laboratories.

Price Complete \$575.00

Fried Camera Co.

6150 Santa Monica Blvd.
Hollywood, Calif.

Also manufacturers of 16mm
printers and testers.

PARAMOUNT and COLUMBIA order

BELL & HOWELL

Production Printers

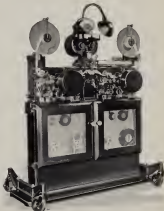
*Three of the world's largest laboratories
now standardize with B & H Automatics*

Bell & Howell cinematographic achievement is again certified by the acceptance of their fully automatic printer. Over a quarter of a million dollars went into the perfection of this printer which owes its success to proved ability to produce finest quality sound prints without mislights, out-of-synchrony, and loss of time for threading and cleaning—at a cost low enough to liquidate the investment quickly. The M-G-M laboratory at Culver City, which was the first to install these machines, has operated a battery of these printers continuously for more than two years.

Write for Complete Information

BELL & HOWELL COMPANY

CHICAGO—1211 Laramie Ave. NEW YORK—31 West 44th St.
HOLLYWOOD—116 South LaBrea Ave. LONDON—222 Regent St.



ASTRO LENSES

F1.8

F2.3



for sale by

Mitchell Camera Corporation
665 North Robertson Blvd.
West Hollywood, California



1515 Cahuenga Blvd.,
Hollywood, Calif.
Phone: GLadstone 2-404

• MOVIOLA •

FILM SORTING EQUIPMENT
Used in Every Major Studio
Illustrated Literature on Request

MOVIOILA CO.

1451 Gordon St. Hollywood, Calif.



is now permanently in our equipment lockers; much of the old apparatus has been replaced with the latest and best. But the value of this standardization of practice and equipment is no less great today than it was then. If anything, it

is paying bigger dividends now than it did when we first awoke to the need of standardization, and I do not believe that any studio can ever be big enough to overlook the benefits such a course can bring.

Progress in Lighting Means Economy

Continued from page 12

the result that the two organizations conducted their historic researches into the possibilities of Mazda lighting. The "Mazda Marathon" definitely proved the second scent to be superior for use with Panchematic film, but I doubt if the innovation would have been accepted so readily had not sound arrived to force the issue. The "linker" was the only really silent lamp available, and it naturally sprang overnight into general use.

The new Solarspots are just as basic an improvement. In the first place, they really direct their light where you want it—and they utilize the light from the globe efficiently; they don't throw any of it away.

Our conventional 18's don't do this. Even when they are fitted with "spill rings," they scatter a lot of light where it not only doesn't do any good, but where it is definitely unwanted. Putting on the spill ring of course reduces the amount of light-throw, but at the cost of killing off the illumination from the entire front side of the globe. And when you begin to flood the lamp out from its rightmost spot, you immediately begin to produce a dark-spot in the center, which increases until at full flood, you have a tremendous difference in strength between the center and the edges of your beam. To get around this, most of us waste still more light by diffusing, and frequently by using two lamps where one really efficient one would do.

These new Solarspots are really efficient. They don't show any dark spots, and I have yet to discover any objectionable hot spots. And their beam is a real beam; the spilled light problem is really and conclusively solved. Thanks to their "Menne-lens" optical system they have a perfectly flat field and utilize almost every possible bit of light that the globe emits.

In practice, this means that in set-lighting, where we would often have to use two of the drum-type lamps, overlapped and diffused, to get away from the dark spots and other failings of such lamps, we only need to use a single Solarspot. In both general and personal lighting, we find that vastly less diffusion is necessary. At present, we are actually using more diffusion than we really should; a 1,000-Watt globe in a Solarspot will turn out more really

usable light than does a 2,000-Watt globe in a reflector-spot, right now, we are using up a stock of the larger globes, and diffusing. When we can standardize on the smaller globes, we will be able to get away from 90% of our present diffusion.

But to me, the really big thing about these new lamps is the fact that the spilled light problem is gone forever. Did you ever stop to think how much valuable time a company loses while the grips "gobs off" this lamp, or hang a "flag" on that one? Well, as we are proving, it runs into real money. With Solarspots, you can place your lamp, focus it—and forget it. No spilled light to give the camera trouble!

But the convincing touch, to me, came when after using this new lamp for several days, a cameraman who had protested the change with all the vehemence of outraged conservatism said, "Wainer, I wouldn't have believed it possible to get so much light from so small a lamp. I can get it into places I wouldn't even try to use an 18—and I never saw a lamp that gave a beam so perfect for photography. You were right after all. When can I have some more of them?"

It's the Audience That Pays

Continued from page 9

only too realistically control the studio situation, bring to light other items of ongoing interest that may well be borne in mind by those who create cinematographic works.

Not all theaters have projection facilities the cinematographer expects. Many of the smaller halls have insufficient amperage to do justice to scenes heavily diffused. As the result, many a scene that is a cinematographic chef d'oeuvre in studio projection seems or in the splendidly equipped larger first-run houses and to which the cinematographer points with pardonable pride, becomes a messy and vague puzzle when weakly projected.

There have been sequels, indeed entire productions, done in so low key and with such emphasis on effects that, while winning raves from professional audiences under perfect projection, have evoked protests of downright complaint

and resentment when screened by inadequate equipment.

Brodine is of the firm view that, projection being what it is, cinematographic practitioners must come to the realization that not all of their supreme lens achievements are practical to employ under existing conditions obtaining where the bulk of film profit returns emanate.

All of which factors express the ever-increasing problems confronting the cine-

matographer as he charts the pictorial delineation of a screen drama.

An exact balance, a correct bit of artistic tight-rope walking, is required to satisfy fully the widely divergent classes of audiences that enervate a pictured production the world over.

That Brodine uniformly bows to professional applause for his cinematographic creations without to any degree alienating his run-of-the-mill audiences is voluminous tribute to the searching soundness of his artistic technique.

An Insert-Car to Meet Today's Need

Cont. from page 11

guard rail. The mount in the body of the car takes things up from the highest level attainable on the platform to a height level with the cab-top mount, which rises on telescoping rods to a position about eight or nine feet in the air.

The front platform is essentially similar to the rear one, but may be removed, and fixed in a still lower position when extremely low angles are needed. Its framework is rigidly braced by tubular members extending forward from the cab, and by turnbuckle-tightened tie-rods underneath.

Every effort has been made by the designers to allow ample floor-space for the camera crews.

When working with lights, the car carries a small, portable generator which is mounted low enough to be out of the way, and to keep the center of gravity safely low. The side-boards of the car-body are removed, and with them a two-foot strip of the flooring in the forward section of the body. Into this cubicle, the generator slides. When cameras are to be mounted in the center section, special supplementary supporting uprights are put into place just behind the generator, short horizontal bars are connected, and the mounts are used normally.

If all four of the camera mounts were used at once, at least eight cameras could be carried, frequently two heavy blimped cameras have been used side-by-side on a single mount, together with such accessories as lights, microphone boom, etc.

Four positions are available for towing other cars, wagons, etc., when such inserts are not to be made by the more general background-projection process. Heavy tubular towbars are provided at front, rear, and amidships, by which a car may be towed beside the insert-car, while a ball-and-socket jointed towbar can be mounted behind the rear platform for towing a car directly off. It is quite possible to tow more than one car at a time. Incidentally, an unusually large and readily adjustable rear-view mirror is fitted so that the driver

can always see what is happening to his tow.

In a word, the new car provides for any possible camera-angle with a rigidity that could never be approached in the old tripod-and-tie-downs fashion. Everything is solidly mounted, yet instantly adjustable, there are no expensive warts while the technicians improvise something on the camera-car—everything is there when the car leaves the studio, and has been since the car was designed. The smoothness, range of speeds, and pick-up have never been bettered, and the designers have tried to leave nothing wanting with respect to the cameraman's convenience and freedom of operation. Best of all, from the studio's point of view, the device

High Fidelity RECORDING GALVANOMETER



Model C Mount

(Variable Area System)
FREQUENCY RANGE, 0 to 10,000
Cycles

A Berndt-Maurer High Fidelity Recording Galvanometer provides the advantages of the Variable Area type of sound track. . . . Several models are available giving a choice of physical dimensions which permit a neat and convenient installation of any recorder or single system camera.

Literature and thorough technical description will be sent on request.

Model "C" High Fidelity Recording Unit . . . \$350.00 in U.S.A.



THE BERNDT-MAURER Corp

117 East 24th Street New York

ALL TYPES OF Cameras and Accessories for SALE and for RENT

We Have on Display the Largest Stock of New and Used Modern Camera Equipment and Accessories of any Camera Supply House in the World

Eastern Representatives

MITCHELL CAMERA CORPORATION
HARRISON FILTERS—FEARLESS PRODUCTS
MOVIEOLA FILM EDITING EQUIPMENT

We only sell equipment that
we can guarantee. Get our
Price Book!

FRANK C. ZUCKER

J. BURGI CONTNER

**MOTION PICTURE CAMERA
SUPPLY, Inc.**

723 Seventh Ave.

New York City

Telephone BRooklyn 9-7755

Cable Address: Cinecamera

Scheibe FILTERS
 In World-Wide Use
 for Daytime, Night and Night Effects, as Daytime-Panoramas, Soften, Focus, Increase Contrast, with any Camera in any Studio.
 George H. Scheibe
 CONCENTRATION OF EFFECT FILTERS
 1801 WEST 10TH ST. LOS ANGELES, CAL.

has been an excellent investment. The records show that the car paid for itself in rentals saved during the first three months of its career. And if its undiminished savings in time, repairs, and makeshift gadget-making could be calculated, the account would be even more favorable. At any rate, it is a really modern camera-car, for modern conditions.

Problems of Controlling Correct Photographic Reproduction

Continued from page 5

graphic reproduction, it is necessary to point attention to the fact that this problem can be considerably simplified if whenever possible the negative exposure level would be raised to a point which would guarantee rendering of all negative densities on the straight-line portion of the characteristic curve. The high speed and wide latitude of present day negative material permits this full exposure under the majority of light conditions. Thus, it is evident that dealing with linear contrast relations only the problem is appreciably simplified, at least as far as the negative is concerned. In the positive print, however, it becomes essential to place part of the reproduction in the curved-toe section to permit rendering of sufficient transparency in the highlights for a faithful reproduction of the overall brightness level.

The article next month will deal with an analysis of visual sensation in comparison to the characteristics of negative and positive emulsions.

Everything Photographic
 for Professional and Amateur
 New and Used, bought, sold, rented and repaired. Designers and manufacturers of H. C. E. Combination lens shade and filter-holder for any size lens.
Hollywood Camera Exchange
 1600 Culverman Blvd., Hollywood
 Tel. HO 8033
 Cable Address: HOCAMEX
 Send for Bargain Catalog

TRUEBALL TRIPOD HEADS
 OF SPECIAL ALLOY LIGHTER WEIGHT
 The Same Efficient Head for follow shots, known for their smoothness of operation and equal tension on all movements. Unaffected by temperature.

Model B Professional \$500.00
 For Bell & Howell and Mitchell Cameras and their respective Tripod. With the ORIGINAL instant release telescopic handle.

FRED HOEFNER
 Glendale 0243
 5319 Santa Monica Boulevard
 LOS ANGELES, CALIF.

Model A for Amateur motion picture cameras. Attaches to any standard RTSLA Tripod, \$12.95.
 Trueball tripod heads are constructed for simplicity, economy and speed of operation.
 The Hoefner freemove lens and shade combination is also a superior product.

AMERICAN CINEMATOGRAPHER
HAND BOOK and REFERENCE GUIDE
 Rich in valuable information for every practical cinematographer. Used by the leading cinematographers in Hollywood studios.
 Only \$2.00 a copy
American Cinematographer
 6331 Hollywood Blvd
 Hollywood, Calif

MAX FACTOR'S NEW
Satin Smooth
LIQUID FOUNDATION
 A REVELATION IN FACIAL MAKE-UP

*Eastman
Super X
Panchromatic
Negative*

Has no equal-
-no superior



J. E. BRULATOUR, INC.
DISTRIBUTORS

THE PROFESSIONAL'S CHOICE
FOR PROFESSIONALLY PERFECT

16 MM. *Personal Movies*

In color or in black-and-white

The professional cinematographer for his personal movies naturally selects a Bell & Howell Filmo Camera. For 29 years Bell & Howell precision-made equipment has taught him to depend on its technical perfection.

For the making of both Kodachrome and monochrome movies, Filmo 70-D is the master of all personal movie cameras. Its fine design and precise construction are particularly essential to fine color results. Its fast Taylor-Hobson lenses are ideally color-corrected. Its 216° shutter admits 20% more light.

Send for the new catalog of Bell & Howell's 16 mm. Filmo Cameras. A versatile Filmo will serve you economically and dependably year after year.

BELL & HOWELL COMPANY
CHICAGO • NEW YORK • HOLLYWOOD • LONDON

Bell & Howell Company
3838 Larchmont Ave., Chicago

Please send me literature describing
☐ Filmo Cameras, ☐ Filmo Projectors,
☐ Filmosound 16 mm. Sound-on-Film
Reproducers

Name _____

Address _____

City _____

State _____


*Filmo 70-D: 16 mm., 4 camera,
8 and 16 speeds, three-lens turret,
variable view finder*



*Filmo 100: Magazine loaded
16 mm. Camera. Sound
repro. For Kodachrome
or monochrome, etc.*

AMATEUR MOVIES

25c



this issue

International Prize Winners
This Matter of Tempo
Adventures in Kodachrome
Lighting With Common Sense
A New Year's Continuity
... and other features

JANUARY
1936



INDOOR MOVIES WITH OUTDOOR SIMPLICITY

INDOOR movies offer the amateur an unlimited opportunity for unusual and dramatic sequences.

Providing that his camera is loaded with a film designed for interior work a film such as Agfa 16mm. Fine Grain Superpan Reversible.

Superpan is an extremely fast film, and is sensitive to all colors including red. Its wide latitude minimizes errors in exposure. These qualities make Superpan an ideal film for interiors by daylight or by Photofloods.

And its extreme fineness of grain means

larger size projection without noticeable grain—with greater boldness, depth and detail.

Agfa 16mm. Fine Grain Superpan Reversible is available in 100-foot rolls at \$7.50, and in 50-foot rolls at \$4.00 including processing and return postage.

OTHER 16 MM. FILMS

Agfa Fine-Grain Panchrome:

100-foot rolls	\$4.50
50-foot rolls	2.75

Including processing and return postage

Agfa Panchromatic Reversible:

100-foot rolls	\$6.00
50-foot rolls	3.25

Including processing and return postage

Agfa Fine-Grain Panchromatic Negative:

100-foot rolls	\$3.50
----------------	--------

Developing not included

200-foot and 400-foot rolls (laboratory packing) available



MADE BY AGFA ANSCO CORPORATION IN BINGHAMTON, N. Y.



AMATEUR MOVIE SECTION

Contents . . .

CONTEST Winners	24
1935 HONORS Split Evenly Between 8mm and 16mm	24
THIS Matter of Tempo by William Stull, A.S.C.	25
ADVENTURING on the Kodachrome Trail by Henry Fonda	26
LIGHTING with Common-Sense by Walter Blanchard	27
A NEW Year's Continuity by J. Dickinson Reed	28
HARMONY in Texture and Design by J. Belmer Hall	29
TWO Interesting Gadgets	30
JUST What Is Montage Anyway? by Max Lenz	31
WHEELS of Industry	32
NEWS of the Clubs	34

Next Month . . .

● J. Belmer Hall will give us another interesting discussion on composition. He will treat somewhat from the Dynamic Symmetry standpoint, keeping it, however, in simple language.

● We will give you further information on entrants in the contest and give the list of those who won honorable mention.

PROFESSIONAL Criticism of the Amateur picture is a part of the service offered by the AMERICAN CINEMATOGRAPHER. Many are not aware of this. Hundreds of pictures have been reviewed this past year by members of the American Society of Cinematographers for the Amateur.

1935 Honors Split Evenly Between 8mm and 16mm

FOR THE THIRD YEAR an 8mm picture won highest honors in the American Cinematographer Amateur Movie Contest.

This year it goes to a new entrant, an amateur who has not been active in our past contests.

While the prizes were fewer this year than in past years, still the competition was more keen than ever before. Last year was considered one of the biggest years, however, the count of both entrants and reels submitted this year (not that doubled last year's entries).

The prizes were broken down into four classes, Home Movie, Scenario, Documentary and Photography. There were four prizes with the grand prize going to the best all-around picture. This, of course, would have to cover a certain classification. In this year's contest it was in the Scenario Class.

Only one prize divides in this country, the others going to Japan and England, with two going to England.

Again T. Okamoto presented a gem of photography, but close on his heels was R. B. Clardy with "Fisherman's Harbor." Clardy was the winner of last year's and a previous year's scenario and grand prize.

In the Home Movie class, Van Dee Seckler, who last year won first prize in this category, was very close in points to the winner.

All the way through it was a very close contest. The winners were shaved very hard by those who were runners-up. In some instances the winners achieved their goal by only a few points.

However, you are more anxious to know the type of pictures that won and just what they consisted of.

"Red Cloud Rides Again," the 8mm picture by Dr. Leichter which was given first prize, was based on a poem that dealt with the pioneers crossing the desert. Its main action had to do with a wagon train being attacked by Indians.

The manner in which Dr. Leichter handled this sequence would have done credit to a studio production. With only one wagon, three horses and six people at his command, he made it look like a production employing more in the way of properties and talent.

His angles, his composition and his cutting are things for every amateur to observe. His story could have easily become hackneyed by poor cutting and editing, but he kept it moving at a fine tempo.

"Moods of Nature," by Paul Brunford, recently won a prize in the Institute of Amateur Cinematographers' con-

WINNERS

GRAND PRIZE: \$250.00 Cash . . Dr. F. R. Leichter, Los Angeles, Calif., for his 8mm picture, "Red Cloud Rides Again."

DOCUMENTARY: \$150.00 trade Bell & Howell . . . Paul Brunford, England, for his 16mm picture, "Moods of Nature."

HOME MOVIE: \$150.00 trade Victor Animatograph Corp. . . T. Lawrenson, England, for his 16mm picture, "Happy Day."

PHOTOGRAPHY: \$150.00 trade Eastman . . . T. Okamoto, Japan, for his 8mm picture, "Autumn Leaves."

RUNNERS UP

In the Scenario class, under the name of Shanting Productions, Frances Christman, Earle Eddy, Harry Merrick and Emanuel Goldman were runners up with their 16mm picture, "Chronicle."

In the Home Movie class, Van Dee Seckler of Los Angeles, who last year won the prize in this class, was very high.

The Documentary class presented the greatest competition. There were two runners up. Fred C. Ellis with his picture, "In the Beginning," and Leslie F. Thatcher of Canada, with his picture, "Fishers of Grande Anse." Photography: R. B. Clardy of Los Angeles, with his picture, "Fisherman's Harbor," was very close in points to the winner.

test in England. Not only does Brunford show a fine sense of rhythm, but a keen eye for composition and a splendid sense of cutting and dramatic values in nature. This picture merely deals with a storm arising and then subsiding. Brunford uses both water and earth to show this. The smashing waves, bending trees and waving wheatfields combine to create his drama. His photography however, is something for which he is to be essentially congratulated.

In the Home Movie field, Lawrenson submitted a fine document of a day with his little 2-year-old daughter. The main portion is given over to a day at the seashore. But he gives flashes for everything he does, even to going home. He shows a storm coming up and after the family has arrived safely at home, the little tot looks out of the window while the raindrops patter on the windowpane.

Okamoto again demonstrates his fine sense of composition, repose and rhythm. Okamoto never hurries his pictures, neither does he hold them too long to bore you. He plans only to give you another fine picture, but he always puts life into his shots. Autumn leaves is a fine Okamoto offering, but in the opinion of the judges it does not contain the same spark of creation as his last year's effort, "Tender Friendship."

The Runners-up also deserve a word of commendation. Some of them showed great ingenuity. Ellis with his pic-

Continued on page 40



Photo by G. M. Best

This Matter of Tempo

by
William Stull, A.S.C.

WEBSTER defines "Tempo" as "rate of movement, specifically the pace at which action or passage moves." I suspect he wrote that definition many years before the cinematograph was invented, but he couldn't have better expressed what we mean today by "tempo" in a movie.

It is strictly because of a lack of understanding of this matter of tempo that so many home-movies are "draggy." And right here, let me say that tempo is just as important to any type of home film as it is to the most important dramatic production. The only reason for making any picture is the hope that it will interest an audience. That goes just as stringently for the baby's bath or a documentary exhibit

telling how to milk a cross-eyed muley-cow named Molly as it does for your club's thrilling production of "The Hazards of Harterose!" So if you want your films to be interesting, it's a good idea to get acquainted with tempo.

One of the chief advantages of the moving picture is the fact that it permits you to compress time, to suggest a tremendous lot of off-screen action without having to show it. For instance, if you want to put over the idea that I am going East, you don't have to show every step of the way—a shot at me packing, one of me buying a ticket, another of me going through a station gate labeled "Train No. 22—Omaha, Chicago, and Points East," a flash of some New York skyscrapers, and a shot of me unpacking tell the story in about fourteen seconds. From the evidence on the screen, I'm indisputably in New York. You could string the thing out three or four times as long with added detail—but it wouldn't make the screened effect a bit more convincing.

So point Number 1 in tempo is to say what you have to say as quickly as possible, without wasting needless time or energy on gratuitous detail.

Point Number 2 is, don't waste footage even in what you show. In the example just given, for instance, it isn't at all necessary to show me doing all of my packing, or to "follow" me after I've passed the station gate. In the first shot, the suitcase can be closed, and the camera picks me up pulling the last strap tight, then I pick up the suitcase and my hat, and START to leave—it isn't necessary to show me going to the door, coming in, going through, and closing it. In the same way the shot at the ticket-office can begin just as I hand my money to the clerk, get my ticket, and end when I turn away, while the shot at the trainshed gate need only show me handing my ticket to the gate-man, after which the camera can pan over to the sign telling where the train goes.

The same holds true for almost any action you can imagine. It is seldom necessary to show a person crossing a room, for a shot of him coming in followed by a shot of him arriving wherever his important action is to be, is usually more than enough to tell the whole thing. In other words, show only the heart of any action—and forget the trimmings.

The physical speed of the action can often help a lot in telling your story. For instance, suppose you want to show, quickly, a person climbing a mountain. You could show him going through a number of different scenes, climbing higher and higher—but that would use up a lot of footage. Instead you can get just as good an effect in two short scenes by beginning with a shot of him starting off briskly at the foot of the grade, followed (connected gracefully by a low-ripple wipe) or fading out and then in to a scene of him at the top, moving slowly, with his coat slung over his shoulder, and obviously hot and tired.

Carrying this same idea a step further, you can use tempo to indicate all sorts of emotional impressions. Suppose, for instance, that you show neighbor Smith out for a comfortable Sunday morning stroll. While he is gone, on important telegram comes, his wife reads it and discovers that it contains bad news—so bad she gives the wire to little Willie and tells him to run after his father. By contrasting the slow tempo of long, detailed shots of Papa Smith's deliberate walk with fast, quick shots of Willie rushing breathlessly in pursuit, we can build up a really noteworthy effect. Similarly, if in the place of Willie and his mother we have some physical destruction rushing along a course which may or may not intersect with Smith's path, we can

Continued on page 24



Photo by Bennett Scherbaum, A.S.C.

Adventuring on the Kodachrome Trail

by
Henry Fonda

SIXTEEN-MILLIMETER filming is teaching me the real why and wherefore of professional movie-making. After having acted in several important productions, I'd begun to feel that I knew a little something, at least, about making motion pictures. Then I bought a 16mm camera and went into production for myself. And what a liberal education I've been getting! Things that seemed meaningless complications to me before, or had even been entirely overlooked, now turn out to be mighty important details—if you ignore them, your picture develops as a coma of fine old limburger on the screen!

My discovery of 16mm came just as I was cast to play in "The Trail of the Lonesome Pine." Ever since I came to Hollywood, I'd been living out my studio experiences, but playing in the first outdoor three-color Technicolor feature just naturally called for color in my personal shooting. Kodachrome movies, of course, supplied the logical answer. I got myself a Simplex camera and some Koda-

chrome film, and set to work. My first idea was to make a silent, Kodachrome version of the picture—but on a feature like that, they shoot well over 200,000 feet of film which translated into 16mm with all economy, would have had me exposing something on the more expensive side of fifty thousand feet of Kodachrome—which would be just too bad! After a few days of energetic shooting, trying to keep up with the Technicolor camera, I decided I'd better turn my plans down to something nearer my size.

But it had to be a regular production, I'd suffered through too many miles of random, animated snapshots to be interested in haphazard filming, even in color. So three of my pals and I are concocting a burlesque "Western." We're taking all the old clichés, all the tried and true lokum, and burlesquing them within an inch of their lives. It's lots of fun—but plenty instructive, too. Best of all, if we can finish the picture as well as we've started it, I don't think it will be one of those films that sends polite home audiences to sleep!

The purely photographic side of the job is easy enough. I simply use my Weston exposure-meter religiously—and that's that. Incidentally, I've found it mighty interesting to ask every other Kodachrome I meet what meter speed-rating he uses. I don't think any two of them have given me the same reply. Personally, I set my meter for a film-speed of 3, and get excellent results. In Kodachrome, as in most color-processes, you can to a considerable extent control the sort of color you get by controlling your exposure. If you want normal colors, try to hit the exposure right on the nose. If you want saltier shadings, overexpose. If you want to brighten the colors, underexpose—or rather, cut down on your exposure. You'll be surprised what you can do this way!

I think you're likely to get the best results in Kodachrome if you do your shooting either very early in the morning, or late in the afternoon, when the shadows are long and interesting, and the light mellowly tinted. I've also heard it suggested that during the middle part of the day, you can get warmer effects by using an Auto 1 filter. I'm going to try it, anyway!

After shooting beside a professional troupe, one of the first things I noticed when I started "on my own" was the absence of reflectors. Don't let anybody tell you they aren't as useful to the amateur as to the professional! When you're shooting people with hats on, for instance, reflectors represent the difference between inky shadows—and faces that mean something. Especially in color! If you asked me to list the most useful accessories in Kodachrome filming, I'd put reflectors along with exposure-meter and tripod as indispensable.

One of the first funny things I noticed when I started to work in the studios was that every now and then the director (any director) would suddenly close his eyes, and make funny pointing movements in the air with his fingers, stepping away to right or left like a candidate for a padded cell. Finally one day I broke down and asked a director what was the big idea. "That," he said, "is just an attempt to keep myself straight on whether to have an actor's look 'camera right' or 'camera left,' so they'll match up with the other scenes." That didn't make any particular impression on me—until I projected the first sequence of my own 16mm production. I'd gotten crossed up on that very point—and ran into rebukes on my first day's work! I had people who should have been facing each other, talking violently into the backs of each other's necks. Doesn't sound possible, does it? But it is. You've got to remember

Continued on page 36



Two Photofloods made this: one in the reading-lamp by the book, the other in a desk-lamp on a clothes-hat just out of the picture at the left.

Lighting with Common-Sense

by
Walter Blanchard

A NUMBER of years ago, I climbed a mountain. I struggled up its rocky face, hanging on by toes, teeth and eyebrows, until at last I reached the top—and found a lovely, smooth pathway by which I might have ascended, without nearly so much trouble and so many bruised shins.

Interior lighting is a good deal like that mountain. You can make no end of work out of it—or you can use a little common-sense, and get there much easier. After all, why is interior lighting—is it to enable us to show off our technique, or to enable us to make pictures? If you say yes to the latter question, I'll ask another: why make pictures? My answer is, to show somebody doing something interesting and natural.

Now if we're trying to show someone doing something interesting and natural, there's no earthly sense in making the job either an ordeal, or a field-day for lighting tricks.

The main thing is to get a natural effect on the screen—and to Holfax with "light effects!" The really important effect to try for is that of absolute naturalness.

In a long-shot, for instance, the effect of naturalness is to have the room look on the screen just as it usually seems, but not all of the lights should be on. Table and does to the eye—without suggesting that someone had set up camera and lights to make pictures. Let's see now—reading-lamps cast pools of light immediately around themselves, but there are plenty of shadows. Lighting such a shot for the camera, you could begin by putting a Photoflood into each of the reading-lamps. Sometimes this will be enough, again, you may find it a good idea to slip a fairly high-powered bulb into the wall fixtures. Where the fixture is in the picture, a 75-Watt globe is usually enough, and using the inside-fitted type, on modern films, you won't have trouble with halation. In other fixtures, chandeliers, and so on, out of the camera's range, you can use Photofloods to add to the general illumination.

Generally, there is some definite point which you want to make the center of attention. The best way to do this is by making it the most brilliantly illuminated part of the picture. If you can't do this with the room's regular table and reading lamps, reinforced with Photofloods, this is the spot to light with your regular photographic lights. And—aside from this one area, don't be afraid of shadows, they simply add to the natural effect!

In closer shots, the problem is different: we still want the natural effect, but we want to add to it a pleasing presentation of whoever is shown in the shot. This introduces the matters of portrait-lighting and posing, but treated sensibly, they needn't be complications. A combination of a single Photoflood in a natural unit, such as a reading lamp, with a couple of regular photographic lighting units, should be quite enough to take care of the matter of illumination.

The first thing in any portrait lighting is balance—not the featureless, flat balance we get when both sides of the subject are illuminated equally, but the pleasing balance we get when one side is lit just a little more strongly, and the other is moulded with soft shadows. The elementary rule for this, of course, is to have two lights, one on each side of the camera, with one of them a little nearer to the subject than the other. It is important to balance the two sides carefully, so that the highlight side is not "burned up," while the shadowed side remains softly shaded—not a harsh, black shadow. Hard, sharp contrasts kill the natural effect.

In close-ups, the important part of the picture is the actor's face: it must dominate all the rest of the scene, and it must be shown to its best advantage. No two faces are alike, so no blanket rule can be laid down for lighting them. Study each face as an individual picture. Invariably, there will be some particular angle which is the best—some feature which is the best, and almost always, some less attractive ones which should be subdued. Ordinary common-sense tells us we should make the most of the good features, and try to minimize the poor ones.

For example, some people, if the light comes too much from the sides, tend to look "baggy" around the eyes. This can be corrected by having the light come more flatly from the front.

Everyone, too, has a "best" side of the face, naturally.

Continued on page 39



New Year's Revolution-- A Comedy Continuity

by
J. Dickinson Reed

SCENE 1. LONG-SHOT of a Church with a number of cars parked in front.

Scene 2. MEDIUM LONG-SHOT of door of Sunday-school room. The children come trooping out, and go to the cars in which their parents wait.

Scene 3. MEDIUM-SHOT of Billy Smith. The camera follows him as he goes to his mother's car, gets in and drives off.

Scene 4. LONG-SHOT from the Smith porch. The car drives up, and Mrs. Smith and Billy come into the house. FADE OUT.

Scene 5. FADE IN. LONG-SHOT in the Smith living-room. Mr. Smith is comfortably seated in an armchair, reading the paper. He looks up as Mrs. Smith and Billy come in.

Scene 6. TWO-SHOT. Mrs. Smith and Billy sit down, and Billy leans forward, talking earnestly.

Scene 7. CLOSE-UP of Billy, talking.

TITLE "an' teacher said everybody ought to make resolutions to get over his bad habits in the new year."

Scene 8. Same as Scene 7. WIPE OFF.

Scene 9. WIPE ON. MEDIUM-SHOT of Billy at a desk. He has just finished writing something. He takes it and nets up.

Scene 10. TWO-SHOT. Billy drops onto the arm of his father's chair, and shows him what he has just written. INSERT "roll-up" shot of the paper, which reads:

New year's resolutions of the Smith Family.

Mr. W. Smith resolves to give up smoking, keeping the funny paper and spanking Billy.

Mother resolves to give up gossiping and feeding us spinach.

Billy Smith resolves to fold his napkin and be more considerate of mama and pappa. And to quit lying.

Signed—

Scene 11. LONG-SHOT of the family group around the desk. Each in turn sits down and signs the paper.

Scene 12. CLOSE-UP of a finger pressing the doorbell button.

Scene 13. Same as Scene 12. Mother leaves to answer doorbell.

Scene 14. LONG-SHOT toward doorway of living-room. Billy and his father in foreground. Mother enters, with a telegram in her hand. She seems excited.

TITLE "It's from Grandma—she's going to visit us next week!"

Scene 15. Same as Scene 14, but very short. FADE OUT.

Scene 16. FADE IN. CLOSE-UP of calendar, with a January, 1935, date; if it is an ordinary calendar, have one date circled in red, with the previous days crossed off; if it is a one day to the sheet calendar, have a hand tear off a leaf. WIPE OFF.

Scene 17. WIPE ON. LONG-SHOT in front of house. The car drives up, and the three Smiths get out, escorting Grandma into the house. FADE OUT.

Scene 18. FADE IN. LONG-SHOT in the living-room. The family come in from driver.

Scene 19. TWO-SHOT of Mr. Smith and Grandma. She presents him with a box of cigars. He pantomimes that he doesn't use them any more. She shows surprise.

Scene 20. MEDIUM-SHOT. Mr. Smith is about to sit down in his chair. Billy comes in with his father's slippers and smoking-jacket, and helps Smith Sr. into them.

Scene 21. CLOSE-UP of Grandmother, showing surprise.

Scene 22. MEDIUM LONG-SHOT. Mr. Smith sinks into his chair, picks up the paper, and carefully takes out the funny-section, which he gives to Billy, who thanks him politely.

Scene 23. TWO-SHOT. Grandmother takes a pair of boxing-gloves from a box, and presents them to Billy. Billy shakes his head, indicating he doesn't fight.

Scene 24. CLOSE-UP of Grandmother, still more surprised.

Scene 25. TWO-SHOT of Mrs. Smith in a chair, Grandmother draws another chair up close, and leans forward confidentially.

Continued on page 38



Harmony in Texture and Design

IN GOOD DESIGN we have many things that must be considered. As harmony is the final basis of good design we must consider the relations of all things used in composition as a whole. First we must have harmony in texture, such as wood, textiles, metals, patterns, and all made objects that have a quality known as texture which is fundamental in the idea of harmony between objects which are used together. If we were to use together, all things of the same texture, the result would be a monotonous textile composition. Textures should harmonize with the structural figure, and all stiff glassy fabrics emphasize the angular and stout figure, while soft dull materials soften the line of all figures.

Rough materials absorb light rays and blend, while glassy surfaces reflect light rays and are less capable of blending colors, thus showing a direct increase in size. When two or more textures are used together, one should predominate, the others become the subordinate or enriching aids.

Natural beauty of colorful material should enhance with the addition of design, never minimized or decreased. If a design does not enhance the material or article, it has no reason for being. If textural quality or color is sufficiently rich, do not hesitate to use it alone.

Textures of different materials reveal an interesting vibration or rhythm of color, as in interior decoration the stipped wall, carved stone, polished metals, or the floss, shiny materials or surfaces reflect light or color to the eye while soft materials break up and result in a gradation of color. The beauty of certain textures like satin, resides very largely in the fact that light, as it plays upon it produces a natural gradation of values. A yellow satin registers in its folds not only a rhythmic movement of values and intensities but even of hues, playing through the yellow-orange to orange and even to the blue side of the spectrum.

by
J. Belmar Hall,

Instructor, Department of Cinema, U.S.C.

In structural design we have textures, which we call MASS, (soft), paper, cloth wood and stone, the accents to these are, hardwood, marble, metal, which are all glassy surfaces and are used to accent or embellish the design. In textiles we have lace, velvet and wool, which are the soft textures, satin, or sateen, the accents, with jewelry used for contrast, and brocades the enrichment note. Each has its place in design and must be used in relation to its proper proportion, then we are bound to have harmony. Harmony of texture is dependent upon the judgment of appearance of different materials used together or through the sense of touch of combinations of materials.

Design must have rhythmic movement, which we call dynamic symmetry and in the last analysis, a purely a matter of space relations, subdivisions, and as such is all composed of mathematical relations. If these relations are orderly, based on some law or laws, it makes for beauty, or whatever name one may give to a thing, which Dr. Vince called, "A marvelous necessity." The illustrations, 1, 2 and 3 are based on this principle, using the spot two rectangle. Each interesting line that crosses is called the eye, and if we study these "eyes" we will find that they are the stopping point of some important line action. Dynamic symmetry is the natural law of all composition, because if we examine any thing in nature we will find that it follows this

Continued on page 37





Wipe-off Title

by
R.Y. Beeiger

THE BASIS of this gadget is the works from an electrical clock, plus, of course, the regular titling stand. The electric clock as you know is based on the cycles and gives a complete revolution every minute. With these known figures it is simple to time the wipe-off arrangement.

The gadget was built around an Eastman titler. A black box was made to fit this titler. On top of the box the electric clock motor was placed. The shaft of the motor extends through the box and connects with the titler-holder by means of a spring clip. There are two frames on the holder, one in the center to make a wipe-on and wipe-off or swirl which will take approximately 30 seconds. The reason it takes only 30 seconds is because it is not necessary to make a complete revolution of the wipe-off blade, but only a half revolution to obtain the effect.

The other frame with the white cord is used for quarter turn, or wipe-on and stop or from a still to a wipe-off which takes about 15 seconds.

The box can be set on end to make a turn-up title or a turn-down title. I use the Eastman titler with the titler-holder frame turned down to clear the titler-holder in the box as you can see from the illustration above has to turn.

If you realize that an electric clock makes one complete revolution a minute, you can readily understand how its works can be adapted to a gadget of this kind. Some more handy gadgeteers may find a method for making burn-door wipes, etc., with this convenience. However, it is a fine suggestion for experimenting.



Footage Indicator

by
L. McKinney

THIS FOOTAGE INDICATOR built for an Eastman Special 16mm camera, could with modifications be applied to most any other make of camera.

The indicator consists of a brass dial, painted white and graduated in feet and frames, mounted on a shaft together with a small bevel gear.

The assembly is mounted in supports at right angles to a main shaft upon which is mounted another gear, meshing with the first mentioned gear and a brass disc grooved to take a coiled wire belt.

The main shaft support is mounted on a brass plate base with prongs on the underside to hold indicator in place on the camera. On one end of the base a brass strip extends down to the shaft carrying the winding crank and at the point in line with the winding shaft a short shaft is mounted having only one bearing. At the end of this short shaft next to the camera is a collar with a square hole in it, which fits over the square projection of the camera winding shaft. At the other end of this shaft and on the other side of the brass strip supporting the shaft is a small brass disc grooved for the belt.

The ratio of RPM between the graduated dial and the camera winding shaft is 1 to 5 and there is therefore 5 feet of film per revolution of the dial.

An index mounted at the edge of the dial and a coil wire belt complete the indicator. The indicator is very easily slipped on and off the camera and can readily be reset to zero without removal.

The advantage of this indicator over the one built into the camera is that it is easier to read, can be read closer and can easily be read while sighting through the viewfinder and it is therefore extremely useful in all double exposure work.

Just What Is "Montage" Anyway?

WHAT IS "MONTAGE"?

When asked, one receives as many different replies as there are people to whom the question was broached.

A cutter will tell you that it is nothing else but a French word, the translation of which means "mounting," by which the art of film-editing is meant. He goes out from the viewpoint that the word was invented by someone who wished to owe the world.

To a craftsman the word "montage" means little more than angle-shots, the screwing the angle the better the "montage."

A director will stare for a moment in the beyond when bothered by the asker, and, describing a vague gesture in the air with a hand, he will reply that "montage" is something, something that some pictures possess and others lack.

And to an actor it is just "nuts."

To a set designer it embodies the amount of outstanding sets the picture boasts.

The special effects department will tell you gleefully that when a picture is devoid of "tricks" it lacks in "montage."

From the production-department the questioner merely receives a cold stare.

And the question remains unanswered. Everyone is treating the question from a personal viewpoint and endows the answer likewise never giving it another thought or a faint suggestion of an attempt to explain it purely from a motion-picture viewpoint.

In filming an exalting answer to this all-important question one must have at his command a complete and detailed understanding of the motion-picture laws, as otherwise one is at a loss to fully explain the intricacies and purposes of "montage," and therefore unable to apply it intelligently and to its fullest scope to the betterment of the motion-picture, endowing it with a much greater power than would be possible any other way, for "montage" is built on the power of suggestion.

What is "montage"?

MONTAGE IS A COMPOSITION OF STRIPS OF FILM, WHICH IN THEIR COMBINATION AND ARRANGEMENT TO ONE ANOTHER CONVEY TO THE AUDIENCE A (SUGGESTED) IDEA OR EMOTION, BUT LACK THIS ABILITY WHEN TORN APART AND PROJECTED SEPARATELY.

In analyzing this answer our attention is called immediately to the power we have here at our command, a power so great that it is liable to booming when used inexperience, inasmuch as we are able to bring over an idea or emotion to the audience merely by the use of single strips of film which are utterly lacking in themselves in bringing over anything at all, in other words strips of film which in themselves, and when projected singly, are absolutely meaningless. It stands to reason that when these meaningless strips of film are composed and arranged in a faulty way they either will not achieve their power, or achieve it in such a way that they convey an entirely different idea than what is demanded, thereby throwing an entirely different light on the development and progress of the story that the film is telling, and in such a way are able to make the audience laugh where it should cry, or vice versa.

by

Max Liezt

Inasmuch as these meaningless strips of film only achieve their ability to bring over an idea when set in their proper arrangement to one another it is of the utmost importance that the "arranger" must be a person who has a profound understanding of the motion-picture laws as otherwise more havoc than good will be achieved and the picture as projected in the theater, will fall flat.

Knowing what "montage" is able to do, it is imperative that we answer the question "When should 'montage' be used?"

"Montage" should, and must, be used wherever there is danger of the audience getting ahead of the story. Inasmuch as we are able with "montage" to convey an idea within the space of a few seconds, without "montage" it would take us minutes to bring over a point that is becoming familiar to the audience in seconds by means of their speedy deduction from the previous scenes, and on account of the speed of the mind the audience would be familiar with this particular point in the story long before the film would have scored it, creating in the mind the statement "The picture is draggy!", and cause the audience to lose interest in the picture.

"Montage" is especially of great value to us when it is used in defining or building of a character in the picture. By this process we can in a few seconds tell the audience everything about a character that it needs to know for motivation of its actions later on, without thereby interfering with the steady unfoldment of the story.

To illustrate the tremendous power of suggestion in "montage" I shall cite an example whereby we shall make use of only three meaningless strips of film, utilizing two of these to create two entirely different and opposing emotions in the third one.

The strips of film are: a shot of a tiger, a shot of a kitten, and a close-up of a man's expressionless face. When projected singly each of these film-strips is meaningless as to idea or emotion.

However, by connecting the blank face with the kitten we suddenly find ourselves reading a tender expression into the man's face.

Now we connect the same blank face with the film-strip of the tiger and we find ourselves reading cruelty into the man's face.

But both times it has been the same strip of film with the same expressionless face, but on account of "montage" with two other meaningless strips of film we were able to create two distinctly different emotions (ideas) in the audience's mind.

When "montage" is understood intimately and employed intelligently, the picture in which it is utilized goes all around.



WHEELS OF INDUSTRY

Eastman Magazine Cine-Kodak

Eastman Kodak Company has produced a new 16mm Cine-Kodak loading with a magazine and having other features further simplifying the taking of motion pictures by the amateur and at the same time providing him with increased versatility of operation.

In addition to the use of a magazine, thereby eliminating the operation of threading the film, the new camera has three speeds, interchangeable lenses, a device that prevents accidental exposure while the camera is not in use, an automatic shut-off for the spring motor, and an ingenious device described as a "pulse" for timing the length of scenes.

Appropriately named "Magazine Cine-Kodak," it can be loaded in three seconds, merely by opening the hinged cover of the camera, as if it were a book, shaping the magazine inside and closing the cover, without having to adjust a single thing inside the camera or on the magazine. Sliding a finger tab on the top of the camera releases the cover for opening and locks it when closed. A further slide of the tab sets the mechanism for operation. Until this is done, the mechanism remains locked and there can be no accidental exposure.

Another eminent advantage is the ability to exchange partly used film for another type without having to run the entire footage to do so. Thus, to switch from Panchromatic to Super-Sensitive "Pan" for indoor pictures or to Kodachrome for color "movies," it is only necessary to remove the partly used magazine and replace it with a magazine loaded with the film desired. A magazine can be removed without the necessity of wasting a single frame of film because of a protecting slide which is moved over the film aperture of the magazine by the same operation that unlocks the cover of the camera. One may have any number of partly used magazines which may be returned to the camera to complete the exposure. The magazine protects the film. A footage meter on each magazine shows how much film has been used, whether in or out of the camera. The dial may be plainly seen through a shutter-proof window in the camera cover.

The Magazine Cine-Kodak also gives

the amateur increased versatility in speeds. There are three of them—normal, half speed and slow motion—controlled by a lever located beneath the built-in exposure guide on the front of the camera and marked "8," "16" and "64."

The new and intriguing device called a "pulse" is located in the side of the camera—a tiny button over which the finger is placed and which "beats" every half foot, or 20 frames, while the film is being run. This is of great convenience in timing the length of a scene.

With the Magazine Cine-Kodak are supplied the same accessory lenses available for Cine-Kodak K and Cine-Kodak Special—the 2-inch f3.5 and the 3-, 4½-, and 6-inch f4.5 telephoto. There is an inexpensive adapter which fits them to the camera by a simplified method. To make a change to any one of the four, the standard f1.9 lens is removed merely by pressing a button, and turning the lens. The adapter fits as easily in its place. Then the other lens is fitted on by sliding a lug on the lens into a slot in the adapter, the rotating collar a given turn or two, and the lens is set in position, taking position.

In focusing, guess work and squinting are taken out by the full-vision eye-level finder system, which competently serves all lenses. The front view finder has two elements. Together, they show the field of the standard f1.9 lens. By sliding the rear element backwards along a track it "clicks" into a notch identified by an arrow as the position for use with the 2-inch lens. Another move backward and it further narrows the field as it slides to the position for the 3-inch lens. Again in the same

way for the 4½- and 6-inch telephoto.

Two other salient features of this camera are: the secured winding crank, which swings back into a notch in the case when not in use, and an automatic shut-off for the spring motor, which insures against over-exposure when the motor is in need of winding. All in all, Magazine Cine-Kodak constitutes a notable advance by Eastman in the further simplification of home "movie" making.

New Kodachrome Processing Station

Eastman Kodak Company has opened another completed Kodachrome processing depot at Chicago. There are now thirty such stations in the United States, the two others being located at Rochester and Los Angeles. The address of the Chicago station is 1727 Indiana Avenue.

New Agfa Processing Station

In order to give faster service to the users of Agfa 16mm reversible film in Northern California and the northwestern states, Agfa Anso has appointed the Motion Picture Service Company, 125 Hyde Street, San Francisco, Cal., as an authorized Agfa Anso 16mm finishing laboratory. This new 16mm finishing laboratory has installed complete new and modern equipment for the processing of 16mm reversible film and is now ready for operation under the supervision of a trained Agfa 16mm technician. Agfa 16mm reversible films sent to the Motion Picture Service Company will be finished promptly and returned to the sender without charge.

Authorized Agfa Anso 16mm reversible film laboratories are now located in New York City, Chicago, Kansas City, Los Angeles, San Francisco and Montreal.

Rolliflex Exhibit

Alajos Schuster, who won the first prize with his picture of a team of horses at a watering fountain—at the Rolliflex Exhibition and Salon—held at the showrooms of Burleigh Brooks, last Spring, will hold a one-man exhibition consisting solely of photographs made with a Rolliflex camera—from December 26th to January 11th.

This exhibition will take place at the
Continued on page 39





New versatility from new accessories

CINÉ-KODAK SPECIAL

LEADER IN THE 16 MM. MOVIE FIELD

TWO new features, several new accessories, now add to the remarkable efficiency of Ciné-Kodak Special.

New features: A Frame Counter and an Audible Shutter Warning. The former's easily read dial keeps you posted on the passage of each of the forty film frames of each film foot, whether being exposed or wound back. The Audible Shutter Warning notifies you that the adjustable opening shutter has been closed, thereby banishing the possibility of wasted footage.

Thus is rounded out a host of unique features: Ground-glass focusing with all focal length lenses, reverse take-up, mask slot between lens and film, revolving lens turret, interchangeable 100- and 200-foot film chambers, speeds from 8 to 64 frames per second, single frame release, one- and eight-frame hand cranks—to mention but a few.

New accessories: An Optical Finder for the exact determination of the fields of all lenses at all distances, Electric Motor Drive with speeds from 1 to 64 frames per second, Reflex Finder Image Magnifier for split-hair focusing, Lens Extension Tube Outfit for filming objects as small as .047 inches in width, and a new telephoto lens set-up of many decided advantages.

Free—The whole story is to be found in the Ciné-Kodak Special Presentation Book, yours upon request, Eastman Kodak Company, Rochester, N. Y.



\$60.00 MOVIE SCREEN

Professional Projection Screen, 5'x7' 1/2' only sold at this extraordinary reduction only while they last. While we have the widest screen of the identical quality used by movie theatres. Professional far sound. Mounted on special rollers and backboards with wall brackets (bracket 10' diameter). Shipping weight, 25 lbs. Write for Catalog, Address and Literature Book containing 1001 professional formulas.

CENTRAL CAMERA CO. Inc. 1555 Oak Ave. E. 336 S. Wabash, Chicago

GOERZ

Announces . . .

a "local service rendered in that work shop—a service that may not be as familiar as it should be. We build to the exacting and particular specifications of advanced amateurs in Still and Cine. Photographic apparatus requiring the highest type of technical precision in its construction.

What are your problems?

C. P. Goetz America Optical Co.
317 East 54th St. New York

Most Valuable

"The American Cinematographer," writes one amateur reader, "is the most valuable magazine I receive. The information it gives is gold."

Reading the American Cinematographer makes your movies more valuable to you.

\$2.50

A YEAR

American Cinematographer

6331 Hollywood Boulevard
HOLLYWOOD, CALIFORNIA

News of the Clubs

Chicago Club

● The Chicago Cinema Club must be glutting for punishment. Their latest bulletin indicates one meeting a week is not enough, extra meetings will soon be held on Monday nights in addition to Thursday night. Why don't they run double features like the regular theatres and pack it into one night? However, congratulations, that's what might be termed real incurable amateurs.

Los Angeles Elects

● In its December meeting the Los Angeles Cinema Club elected a new staff of officers. Franklin B. Skeels was given the post of president. Skeels was secretary several years ago. Mr. Gram was elected as secretary and treasurer, while Dr. Letty Bailey, the former secretary, was made vice-president.

At the meeting the winners of the

annual prizes were announced. Dr. Linck won first prize with his 8mm picture of the "San Diego Fair." C. E. Memory won second prize with a documentary picture called "Pacific Highways." President-elect Skeels was also among the winners with his vacation picture titled "Hook, Line and Sinker."

Los Angeles Sew Club

● The Los Angeles 8mm Club elected new officers at its annual banquet meeting. Dr. Henry A. Linck was made president, Mr. G. Ward was elected secretary and treasurer and Mr. E. Jando, vice-president.

At this meeting winners of the annual prizes were announced. The first prize went to Dr. Lecher for his picture "Red Cloud Rides Again," the second prize to Claude Cordier for his picture "Conscience," and the third to R. B. Clardy for "Fahnestock's Harbor."

This Matter of Tempo

Continued from page 25

by the same method build up to a high state of suspense, well he get out of the way in time, or will he tumble unsuspectingly into the path of the onrushing danger?

Another place where we meet old man tempo is in camera-angles and the positioning of the players. Oh, yes, and we can make him work for us in a surprising variety of ways. Generally speaking, the larger an object is in the picture or, to put it differently, the closer it is to the camera, the faster it seems to move. For instance, if we make an extreme long-shot of a train—even the latest streamline speedster—it rarely gives much of an impression of speed. If we come closer, so that the train fills more of the screen area, the apparent movement speeds up appreciably, and if we make a real close-up of the train—even a dyspeptic freight—our audience gets the impression of roaring, break-neck speed. If you saw the professional film "Silver Streak," you may have noticed this fact. In it was a long sequence in which the celebrated Burlington "Zephyr" apparently ran wild, it was supposed to furnish one of the big thrills of the picture—but it fell flat because the director chose to play it largely in long-shots which gave no impression of speed. Only in the extremely few closer shots did you have any feeling that the train was really rocketing along at a hundred-mph clip.

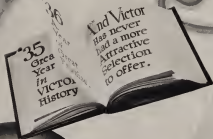
This same rule holds good no matter

what the action is, our subject may be a racing car, an airplane, the "Normandie"—or the kiddies playing in the back yard. Always, the commanding position is that nearest the camera.

An important contributing factor in this, of course, is the fact that in showing swift-moving action in close shots, most subjects get into and out of the picture very quickly, so that the scene occupies only a few split-seconds of screen time. Obviously, then, you can do a lot to pep up a lagging tempo by cutting down on the length of your scenes. Generalizing once more, if we want to set a slow, placid tempo, we should use long shots, and allow them plenty of footage, and we should have relatively few cuts from one shot to another. On the other hand, if we want a fast tempo, we should use closer shots, clipping them short, and using more of them, to give variety and zip to the sequence. A wisely selected assortment of different camera-angles on the action can help, too. But here's another thing to remember: if your scenes are short, and your action fast-moving, choose angles that are easily understood. Save the intricate "orb" angles for slower-paced sequences. Let's say the average 16mm scene is five feet long—that gives the audience ten seconds to see it and grasp its meaning before the next shot comes along. If we're setting a fast tempo with close, short-inneshot shots, this time may be cut down to but one or two seconds—or even less. And if

THANK YOU

FOR HELPING TO MAKE
1935 THE GREATEST
OF OUR 25 YEARS



REG. U.S.
PAT. OFF.

MAJOR ATTRACTION
TO • START • THE
NEW • YEAR

id
MODEL • 25
ANIMATOPHONE

*World's Smallest,
Finest, Lowest Priced*
HIGH QUALITY
SOUND PROJECTOR

VICTOR ANIMATOGRAPH CORP.
2155 WEST CHICAGO STREET, CHICAGO, ILL.

CAMERAS • SILENT *and* SOUND PROJECTORS

Keep Those New Year's Resolutions So
MAKE BETTER MOVIES
 by changing your
CINE KODAK SPECIAL
VECTOR MODEL TYPE CAMERA
 with a
BU MORE RADIAL WIFE
512.50 Perpetual
 No Alteration of Course
J. D. Cochran, 734 Brooks Ave.,
Weymouth, Massachusetts, 01978

DEVELOP & PRINT
Your Own 16mm Film
 IT'S IN
PHIL- LAB
 DEVELOPING RACK
 100 ft. Rack in 11 & 14
 Trays Also 25 ft. Rack
 for Trif
 CONTINUOUS PRINTER
 (W/1 handle up to 400 ft)
 Send for literature now!
PHILLIPS LABORATORY 453 Highland Ave.
 Westfield N. J.

FOTO - FADE

Mix fade-in and fade-outs with Foto
 Fade on reversible film after develop-
 ment. Used in Hollywood studios. \$1.80
 allows you enough for a hundred fades!
FYE RESEARCH LABORATORIES
 218 Jackson St., Los Angeles, Calif.

Seems
EXCEPTIONALLY FINE LIBRARY
 Includes: Time, News, Discovery
 Charlie Chaplin, etc.
 Also
 Sam Kravitz Producer, Model G-1
 Write for Catalog and Low Price List

Harry's Camera Shop, 357 W. 50 St.
N. Y. C.

HUGO MEYER *Ciné*
 SPEEDS 1/15 TO 1/1000
LENSES
HUGO MEYER & CO
 345 W. 55 St., NEW YORK

The New 16mm
PANCHROMATIC NEGATIVES
 (Eastman Ans. Dupont)
 will surprise you with their fine quality
 their beautiful tones and glowing
 reproductions if you have them developed
 by the
DUNNING GRAINLESS METHOD
DUNNING PROCESS COMPANY
 932 N. La Brea Avenue
 Hollywood, Calif.
 (35mm reduced to 16mm)

16mm RECORDING 16mm

Professional Sound Direct on Film
USING THE DOUBLE SYSTEM
Many Times Cheaper and Better Than
35mm Reductions
 •Mixing of 16mm and 35mm Recording
 Heads, Amplifiers, Developing Machines,
 Printers, Etc.,
CINEMA ARTS-CRAFTS
 552 N. Fairfax RD. 1184 Hollywood, Calif.

the way the camera shows the action to
 the audience isn't simple and quickly
 understood, the shot will be gone before
 the viewer has a chance to figure out
 what he's looking at.

Using these last two tempo-builders—
 close angles and cued cutting—it is easy
 to build up to a fast tempo from a slow
 start. You can begin with long-shots,
 cut fairly long, and work progressively
 closer and shorter, until you have thrust
 moving to a climax comparable to a
 Russian Montage sequence. On the

other hand, since a fast tempo such as
 this usually builds to a really important
 climax, it's not often advisable to at-
 tempt the reverse of this trick when you
 have to slow down, though a skilful
 cineaste can do it. Much better, as a
 rule, to use a very slow transition like
 a slow fadeout followed by a deliberate
 fade-in. This breaks the chain of
 thought definitely (which you usually
 want to do) and by its slow-paced
 bridging over to the next sequence, paves
 the way for a more deliberate tempo to
 follow.

Adventuring on the Kodachrome Trail

Continued from page 26

that the camera represents the eye of
 the audience, which will see the various
 scenes in relation to each other. So
 if you want things to look right on the
 screen, you've got to direct your scenes
 so that, when they are cut together,
 every angle and action will fit in properly
 with the impression established by
 those already shown. Often this will
 entail shooting things in a way that, at
 the time, seems absolutely wrong, but
 which if you'll only stop to visualize your
 whole scene as a projected picture,
 will prove to be right on the screen.

Another tricky matter is that of exits
 and entrances. If I show a fellow leav-
 ing a scene "camera right," I must show
 him entering his next scene from "cam-
 era left." The first scene establishes a
 direction for his movement in the au-
 dience's mind, and if he swerves it in
 succeeding shots (without being shown
 doing something which would account
 for the change) the audience will be
 confused, and feel that something
 screwy has happened. By the same tok-
 en, in "cross" sequences, this matter
 of continuity of movement is doggedly
 important. Suppose, for instance, that
 I show Jim Stewart leaving one scene
 with a posse at his heels. He leaves
 the scene heading "camera right;" well,
 he's got to enter each succeeding scene
 from "camera left" until he escapes or
 gets caught—unless I very clearly show
 him doubling on his tracks, then he
 would just as naturally have to carry on
 his movements from right to left. The
 posse, too, must leave the first scene
 going "camera right," and enter suc-
 ceeding ones from the left. On the
 other hand, if Jim and the posse are
 going in opposite directions—either away
 from each other, or approaching each
 other—one must always move across
 the screen in one direction, and the
 other in the opposite direction. It
 damn near breaks your heart keep-
 ing these things straight, for you'll
 be doing things that are abso-
 lutely illogical in real life, and you'll

often have to forgo shots that would
 be highly effective individually if shot
 some other way—but this real effect is
 what shows up on the screen. Similarly,
 if you want straight angles on such
 scenes, remember that the person being
 chased should be shown going away from
 the camera, and the pursuers always
 coming toward the camera.

We've had a lot of fun kidding the
 styles of some of the professional movie-
 makers. For instance, there is one com-
 pany which almost always begins its
 pictures by a succession of close shots
 of the principal players—just by way of
 introduction. We're doing the same
 thing, with variations. For the past
 month, we've grabbed a close-up of
 every Tom, Dick and Harry that came
 near the house—the postman, the vic-
 man, the milkman, the grocer's boy,
 and everyone else. We'll open the pic-
 ture with an endless succession of these
 close-ups—and then ignore the people
 shown! Another tradition we're desec-
 rating is the business of "reactions"—
 you know, "A" shoots "B," and at the
 shot, you are shown "flashes" of a doz-
 en other characters reacting to the
 sound. We're shooting each of our re-
 actions three times, each "take" being
 identical with its companions. So
 when, in one sequence, we show a fel-
 low reacting to the sound of a shot
 by suddenly stepping lofting his face
 and looking up, we'll also use the same
 reaction for anything else he's supposed
 to react to—even if the action of the
 later business may be at midnight, or
 what he's to react to is entirely differ-
 ent.

In one sequence, we've essayed a dual
 role. Jim Stewart, dressed as a cowboy,
 climbs up onto the roof of the house,
 and carefully scans the horizon. In the
 distance he sees—Jim Stewart, in a
 different costume, approaching. The sec-
 ond Jim Stewart glides through the
 bushes, watching Jim No. 1. The Jim
 on the housepot notices for his gun, the
 lower Jim pulls out a huge cop-pistol

rejoice a car-pistol, as proven by a close-up, and fires Jim-on-the-roof is hit, and starts to fall. Then we show three short "flashes"—a, b, c—three are identical "flashes"—a flock of assorted teachers from innocent bystanders, and finally the defense Jim plops onto the ground, as though he had fallen from a tremendous height. A tremendous flow of gory red blood factually beef-juice, but in Kodachrome it makes swell blood gushes from his mouth. Jim-on-the-ground comes over, looks at the remains, and proceeds to kick his own corpse in the face! How was that done? Just a matter of cutting: close shot of the corpse, long-shot of Jim approaching the corpse, close-up of him looking down scornfully, close-up of his "remains" on the ground, with a pair of legs in the background (Jim's trousers and shoes, occupied by someone else), and the kick itself. On the screen, you'd swear Jim had kicked himself!

And we've struck a knockout of an idea for our opening title. We're going to give the show a very melodramatic name—something like "Hearts Aflame," or the like. For our opening title, we're going to sketch a generous roll of cotton just below the lower camera-line. After dousing the cotton with lighter-fluid, to make it burn hotter, we'll sprinkle on a copper oxide powder one of the studio prop-men told me about, so that the flames will be spectacularly colored red and green. We'll open the title on these flames, then we'll lower a sheet of tissue paper, into which the title-lettering is cut like a stencil, between the flames and the camera. After we've made enough footage of the flaming letters, we'll set fire to the tissue, and let the title burn itself away from the bottom up. At least, we'll start the picture off with a real "hot" title!





Harmony in Texture and Design

Continued from page 29

low end) no matter how the elements in nature may force some growth into either coils that are not natural to it, it will retain within itself its proper proportion as a whole. The screen proportion is nearly a root two rectangle and since the advent of sound comes nearer to the proper dimensions for perfect composition.

Illustrations 4, 5 and 6 show how the cinematographer deals with light in dynamic relation so as to get the most striking effect. The mixing of light and shade is important to good composition so that the tonal qualities of textural surfaces will show to the best advantage. Dramatic lighting creates the mood and holds the spectator's attention throughout the entire sequence.

SIMPLE MATHEMATICS

TO SAFELY STORE FILM YOU NEED	EITHER	 HUMIDOR CASE	+	 ORDINARY CASE	=	\$ 7.00 (UP!)
		 NO HUMIDOR CASE REQUIRED WITH THE STRONGBOX HUMIDOR! (1/2 HALL & LARGE FOOT HUMIDOR BUILT-IN)		 STRONGBOX HUMIDOR	=	2.85 (ONLY!) \$ 4.15 SAVED!

STRONGBOX SECURITY IN A HUMIDOR HOUSING

THERE'S A SIZE, TOO, FOR 8 MM REELS AT ONLY \$2.85

Wm. J. Grace
ESTABLISHED 1906

312 WEST PAKE
DALLAS, TEXAS

CAN YOU AFFORD TO OVERLOOK THIS SAVING?

9

Cinematographic Annual, Vol. 1 - Now \$2.00

When You TAKE or SHOW Movies

--Steady your Camera with a DA-LITE UNIPOD!

The No. 1 work-horse on the ground and in the air! It holds up 1 lb. and 2 lb. cameras (even into against the body and adding to eye-level). Both are easy to carry, proved widely portable and most easy for illustration is shown here.



DA-LITE
The mark of quality for more than a quarter of a century



Steady Your Projector on a DA-LITE PROJECTOR STAND

It prevents vibration. Equipped with either a rubber silent projector platform (with side clamps to grip the projector) or a screwing table for most projectors. See us or dealers or write for illustrated folder!

DA-LITE SCREEN CO., Inc.
2722 N. Crawford Ave., Chicago, Ill.

DA-LITE SCREENS
AND MOVIE ACCESSORIES

WHEELS OF INDUSTRY

Continued from page 32

showrooms of Burling Bricks, 127 West 42 Street, New York, and will consist of about 200 prints, many of which feature diversified and interesting activities and developments which have recently taken place in the public parks of New York City. All of them illustrate the versatility of the Rollei-flex camera and its unique adaptability to varying photographic conditions.

"Ethiopia" is 16mm Film

●The first raw, single-reel 16mm motion picture subject on Ethiopia, sound-on-film or silent, is announced as available for sale or rental by the Library Division of the Bell & Howell Company. This timely and vitally interesting film portrays the nature of the country and the intimate daily life of the people. The sound narrative, entirely free from forced "war-cries," provides an intelligent, fair, and undistorted presentation of Ethiopian history, population, form of government, economic peculiarities, mores, religions, and many other points of interest.

It is not a transitory "war" film, although thousands of tribesmen, afloat and on horseback, are caught by the camera, and the problems of providing food for a vast army are distinctly portrayed. A high spot of the film is the raw-meat-eating ritual of courage, practiced by the army on the eve of its departure for battle, under the watchful eye of the Emperor. The photography, of intense interest and high educational content, is by Burton Holmes, world-renowned traveler.

The sound version can be rented. A silent version, with copy of the narrative text supplementing a minimum of titles, will also be available.

B. & H. Sell Printers

●Metro-Goldwyn-Mayer, Paramount, and Columbia Pictures have contracted for the installation of new duplicating equipment known as Automatic Sound and Picture Printers.

These printers were developed in the engineering and research laboratories of the Bell & Howell Company, Chicago, and have been perfected as the result of five years of development.

Both the picture and the sound track are automatically reproduced on these machines at one operation, retaining all of the depth and definition of the original film and without loss of the full range of the recorded sound. As a result, pictures are now being released combining such photographic excellence and faithful sound reproduction that the

most critical audience will be free to enjoy the new films as pure entertainment without making allowances for losses due to imperfect printing.

Unlike the printers formerly used, the new machines are entirely independent of the skill of the operator. Although running at higher speeds, these printers are equipped with interlocking controls and safety devices which make them entirely foolproof. They will stop instantly and automatically in case of film breakage, lamp burn-outs, power-line variations or failure of the air-supply lines which vacuum-clean the film while it is being run. Film waste is thus entirely eliminated.

Lighting With Common-Sense

Continued from page 23

that is the side to present to the camera. John Barrymore's celebrated profile, for instance, was always seen from the left, even in its heyday, his right profile was distinctly unimposing. I have a friend who, from the right, looks strikingly like John Gilbert—while from the left, he suggests an intoxicated owl. Pick your victim's best angle!

Suppose your subject has a thin face, or high, Indonesian cheek bones. These defects can be subdued by having the light aimed to fall rather low on the cheeks—just below the point of the cheek bone.

Those big, square "captains-of-industry" lower jaws will stand out like a sore thumb if you shoot a full-face angle, but they retire into the background if you keep the subject's head turned slightly to one side or the other. Weak chins—and multiple chins, as well—can be improved by having the subject keep his head tilted up a bit.

Noses can be quite a problem. In the first place, they are likely to cast unpleasant shadows. But these shadows can be eliminated in two ways: first, by having the lamps in a rather high position, so that the shadow falls at a natural (and therefore pleasing) angle—generally coming down to about the corner of the mouth. Or the shadows can be eliminated completely, by lighting very flatly. If a nose is bent, as many are which have been broken and poorly set, you can often hide the bend by shooting from a three-quarter angle, rather than full-face, and outlining the top of the nose with a rather strong high-light from the rear.

Especially with women, the moulding of the jaw must be considered, if the lines

A NEW ADDITION
TO

FOTOSHOP Cine Film

ULTRA RAPID

Panchromatic 16mm
Film

\$4.25, 100 Feet

We guarantee this film as fast under all conditions, and as fine grained as any super-sensitive 16mm film now being sold.

OTHER FILMS as low as \$2.39 100 ft.
All prices include processing.
Send For Circular

Fotoshop, Inc.

1861A West 32nd St., New York City



16 millimeter
Sound
Recorder

The B. M. Standard Sound Recording System meets every requirement that the 16 mm. field can offer, ensures superior results, and provides for complete control of recording at every step. Priced at \$630 complete.

Write for full details

THE **BERNARD-MAURER** CORP.
217 WEST 34TH STREET, NEW YORK CITY



Amateur Movie Contest



This month's issue gives you the winners of the American Cinematographer 1985 Amateur Movie Contest.

Start thinking about your picture for 1986. The contest will close on November 30th.

This contest will be divided differently again. We will endeavor to give wider recognition . . . that is to offer prizes for more classifications.

Each year presents a different problem . . . it is to solve these problems and in an effort to recognize the serious effects of the amateur contest classifications are changed from time to time.

The rules will be the same as last year. You can enter either 8mm or 16mm film. 35mm film will not be accepted in this contest, nor will reductions from 35mm film be allowed.

CONTEST EDITOR
AMERICAN CINEMATOGRAPHER

6331 Hollywood Boulevard

Hollywood, California

The Way to Better Photography
is through

Mitchell Cameras

The Standard the World Over
in all Leading Studios



Mitchell Camera Corporation

665 N. ROBERTSON BOULEVARD
WEST HOLLYWOOD, CALIF.

Cable Address "MITCAMCO"

AGENCIES

Phone OXford 2051

CLAUD C. CARTER
Sydney, Australia

MOTION PICTURES CAMERA SUPPLY INC., New York City

D. NAGASE & CO., Ltd. BOMBAY RADIO CO.,
Osaka, Japan Ltd.

Bombay, India

ARMINIO CONTI, H. NASSIBIAN
Rome, Italy Cairo, Egypt